

SEQUENCE LISTING

<110> The University of Melbourne (All states, except U.S.)
Kent, Stephen J (U.S. only)
<120> Immunomodulating compositions, uses therefor and processes for their
production

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Pro Pro Glu Asp Pro Ala Val Asp Leu Leu Lys Asn Tyr Met Gln
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Arg Glu Ser Arg Glu Lys Pro Tyr Lys Glu Val Thr Glu Asp Leu
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Glu Lys Pro Tyr Lys Glu Val Thr Glu Asp Leu Leu His Leu Asn
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Lys Asn Val Glu Ile Glu Val Leu Gly Lys Arg Ile Lys Gly Thr
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Ile Glu Val Leu Gly Lys Arg Ile Lys Gly Thr Ile Met Thr Gly
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Ser Leu Asn Phe Pro Ile Ala Lys Val Glu Pro Val Lys Val Ala
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Glu Ala Pro Pro Thr Asn Pro Tyr Asn Thr Pro Thr Phe Ala Ile
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Thr Asn Pro Tyr Asn Thr Pro Thr Phe Ala Ile Lys Lys Lys Asp
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Pro Ala Gly Leu Ala Lys Arg Lys Arg Ile Thr Val Leu Asp Ile
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Ala Lys Arg Lys Arg Ile Thr Val Leu Asp Ile Gly Asp Ala Tyr
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Asp Ala Tyr Phe Ser Ile Pro Leu Asp Glu Glu Phe Arg Gln Tyr
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Ser Ile Pro Leu Asp Glu Glu Phe Arg Gln Tyr Thr Ala Phe Thr
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Asp Glu Glu Phe Arg Gln Tyr Thr Ala Phe Thr Leu Pro Ser Val
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Asn Ala Glu Pro Gly Lys Arg Tyr Ile Tyr Lys Val Leu Pro Gln
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Gly Lys Arg Tyr Ile Tyr Lys Val Leu Pro Gln Gly Trp Lys Gly
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Ile Tyr Lys Val Leu Pro Gln Gly Trp Lys Gly Ser Pro Ala Ile
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Gln Tyr Thr Met Arg His Val Leu Glu Pro Phe Arg Lys Ala Asn
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Arg His Val Leu Glu Pro Phe Arg Lys Ala Asn Pro Asp Val Thr
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Glu Pro Phe Arg Lys Ala Asn Pro Asp Val Thr Leu Val Gln Tyr
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Lys Ala Asn Pro Asp Val Thr Leu Val Gln Tyr Met Asp Asp Ile
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Asp Val Thr Leu Val Gln Tyr Met Asp Asp Ile Leu Ile Ala Ser
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Val Gln Tyr Met Asp Asp Ile Leu Ile Ala Ser Asp Arg Thr Asp
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Asp Asp Ile Leu Ile Ala Ser Asp Arg Thr Asp Leu Glu His Asp
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Arg Thr Asp Leu Glu His Asp Arg Val Val Leu Gln Ser Lys Glu
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Glu His Asp Arg Val Val Leu Gln Ser Lys Glu Leu Leu Asn Ser
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Val Val Leu Gln Ser Lys Glu Leu Leu Asn Ser Ile Gly Phe Ser
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Ser Lys Glu Leu Leu Asn Ser Ile Gly Phe Ser Thr Pro Glu Glu
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<400> 231

Gly	Phe	Ser	Thr	Pro	Glu	Glu	Lys	Phe	Gln	Lys	Asp	Pro	Pro	Phe
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<400> 232

Pro	Glu	Glu	Lys	Phe	Gln	Lys	Asp	Pro	Pro	Phe	Gln	Trp	Met	Gly
1				5					10					15

<210> 233

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<220>

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<400> 233

Phe	Gln	Lys	Asp	Pro	Pro	Phe	Gln	Trp	Met	Gly	Tyr	Glu	Leu	Trp
1				5					10					15

<210> 234

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<400> 234

Pro Pro Phe Gln Trp Met Gly Tyr Glu Leu Trp Pro Thr Lys Trp
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<400> 235

Trp Met Gly Tyr Glu Leu Trp Pro Thr Lys Trp Lys Leu Gln Lys
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<400> 236

Glu Leu Trp Pro Thr Lys Trp Lys Leu Gln Lys Ile Glu Leu Pro
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Thr Lys Trp Lys Leu Gln Lys Ile Glu Leu Pro Gln Arg Glu Thr
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Leu Gln Lys Ile Glu Leu Pro Gln Arg Glu Thr Trp Thr Val Asn
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Glu Leu Pro Gln Arg Glu Thr Trp Thr Val Asn Asp Ile Gln Lys
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Arg Glu Thr Trp Thr Val Asn Asp Ile Gln Lys Leu Val Gly Val
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Thr Val Asn Asp Ile Gln Lys Leu Val Gly Val Leu Asn Trp Ala
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<400> 243

Val Gly Val Leu Asn Trp Ala Ala Gln Ile Tyr Pro Gly Ile Lys
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Asn Trp Ala Ala Gln Ile Tyr Pro Gly Ile Lys Thr Lys His Leu
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<223> SIV pol peptide 120

<400> 245

Gln Ile Tyr Pro Gly Ile Lys Thr Lys His Leu Cys Arg Leu Ile
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<223> SIV pol peptide 121

<400> 246

Gly Ile Lys Thr Lys His Leu Cys Arg Leu Ile Arg Gly Lys Met
1 5 10 15

<210> 247

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<223> SIV pol peptide 122

<400> 247

Lys His Leu Cys Arg Leu Ile Arg Gly Lys Met Thr Leu Thr Glu
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<400> 248

Arg Leu Ile Arg Gly Lys Met Thr Leu Thr Glu Glu Val Gln Trp
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<400> 249

Gly Lys Met Thr Leu Thr Glu Glu Val Gln Trp Thr Glu Met Ala
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Leu Thr Glu Glu Val Gln Trp Thr Glu Met Ala Glu Ala Glu Tyr
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<400> 251

Val Gln Trp Thr Glu Met Ala Glu Ala Glu Tyr Glu Glu Asn Lys
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<400> 252

Glu Met Ala Glu Ala Glu Tyr Glu Glu Asn Lys Ile Ile Leu Ser
1 5 10 15

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<400> 253

Ala Glu Tyr Glu Glu Asn Lys Ile Ile Leu Ser Gln Glu Gln Glu
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<400> 254

Glu Asn Lys Ile Ile Leu Ser Gln Glu Gln Glu Gly Cys Tyr Tyr
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<400> 255

Ile Leu Ser Gln Glu Gln Glu Gly Cys Tyr Tyr Gln Glu Gly Lys
1 5 10 15

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<400> 256

Glu Gln Glu Gly Cys Tyr Tyr Gln Glu Gly Lys Pro Leu Glu Ala
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<223> SIV pol peptide 132

<400> 257

Cys Tyr Tyr Gln Glu Gly Lys Pro Leu Glu Ala Thr Val Ile Lys
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<211> 15

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<223> SIV pol peptide 133

<400> 258

Glu Gly Lys Pro Leu Glu Ala Thr Val Ile Lys Ser Gln Asp Asn
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<211> 15

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<223> SIV pol peptide 134

<400> 259

Leu Glu Ala Thr Val Ile Lys Ser Gln Asp Asn Gln Trp Ser Tyr
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<211> 15

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<223> SIV pol peptide 135

<400> 260

Val Ile Lys Ser Gln Asp Asn Gln Trp Ser Tyr Lys Ile His Gln

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Gln Asp Asn Gln Trp Ser Tyr Lys Ile His Gln Glu Asp Lys Ile
1 5 10 15

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<400> 262

Trp Ser Tyr Lys Ile His Gln Glu Asp Lys Ile Leu Lys Val Gly
1 5 10 15

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<400> 263

Ile His Gln Glu Asp Lys Ile Leu Lys Val Gly Lys Phe Ala Lys
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<400> 264

Asp Lys Ile Leu Lys Val Gly Lys Phe Ala Lys Ile Lys Asn Thr
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Lys Val Gly Lys Phe Ala Lys Ile Lys Asn Thr His Thr Asn Gly
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Phe Ala Lys Ile Lys Asn Thr His Thr Asn Gly Val Arg Leu Leu
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Lys Asn Thr His Thr Asn Gly Val Arg Leu Leu Ala His Val Ile
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Thr Asn Gly Val Arg Leu Leu Ala His Val Ile Gln Lys Ile Gly
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Arg Leu Leu Ala His Val Ile Gln Lys Ile Gly Lys Glu Ala Ile
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His Val Ile Gln Lys Ile Gly Lys Glu Ala Ile Val Ile Trp Gly
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Lys Ile Gly Lys Glu Ala Ile Val Ile Trp Gly Gln Val Pro Lys
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Glu Ala Ile Val Ile Trp Gly Gln Val Pro Lys Phe His Leu Pro
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Ile Trp Gly Gln Val Pro Lys Phe His Leu Pro Val Glu Lys Asp
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Val Pro Lys Phe His Leu Pro Val Glu Lys Asp Val Trp Glu Gln
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Glu Lys Asp Val Trp Glu Gln Trp Trp Thr Asp Tyr Trp Gln Val
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Trp Thr Asp Tyr Trp Gln Val Thr Trp Ile Pro Glu Trp Asp Phe
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Ser Thr Pro Pro Leu Val Arg Leu Val Phe Asn Leu Val Lys Asp
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Leu Val Arg Leu Val Phe Asn Leu Val Lys Asp Pro Ile Glu Gly
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Val Phe Asn Leu Val Lys Asp Pro Ile Glu Gly Glu Glu Thr Tyr
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Val Lys Asp Pro Ile Glu Gly Glu Glu Thr Tyr Tyr Thr Asp Gly
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Ile Glu Gly Glu Glu Thr Tyr Tyr Thr Asp Gly Ser Cys Asn Lys
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Glu Thr Tyr Tyr Thr Asp Gly Ser Cys Asn Lys Gln Ser Lys Glu
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Thr Asp Gly Ser Cys Asn Lys Gln Ser Lys Glu Gly Lys Ala Gly
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Cys Asn Lys Gln Ser Lys Glu Gly Lys Ala Gly Tyr Ile Thr Asp
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Ser Lys Glu Gly Lys Ala Gly Tyr Ile Thr Asp Arg Gly Lys Asp
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Lys Ala Gly Tyr Ile Thr Asp Arg Gly Lys Asp Lys Val Lys Val
1 5 10 15

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Ile Thr Asp Arg Gly Lys Asp Lys Val Lys Val Leu Glu Gln Thr
1 5 10 15

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Gly Lys Asp Lys Val Lys Val Leu Glu Gln Thr Thr Asn Gln Gln
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Val Lys Val Leu Glu Gln Thr Thr Asn Gln Gln Ala Glu Leu Glu
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Glu Gln Thr Thr Asn Gln Gln Ala Glu Leu Glu Ala Phe Leu Met
1 5 10 15

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Asn Gln Gln Ala Glu Leu Glu Ala Phe Leu Met Ala Leu Thr Asp
1 5 10 15

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Glu Leu Glu Ala Phe Leu Met Ala Leu Thr Asp Ser Gly Pro Lys
1 5 10 15

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Phe Leu Met Ala Leu Thr Asp Ser Gly Pro Lys Ala Asn Ile Ile
1 5 10 15

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Leu Thr Asp Ser Gly Pro Lys Ala Asn Ile Ile Val Asp Ser Gln
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Gly Pro Lys Ala Asn Ile Ile Val Asp Ser Gln Tyr Val Met Gly
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<400> 301

Asn Ile Ile Val Asp Ser Gln Tyr Val Met Gly Ile Ile Thr Gly
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<400> 302

Asp Ser Gln Tyr Val Met Gly Ile Ile Thr Gly Cys Pro Thr Glu
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Val Met Gly Ile Ile Thr Gly Cys Pro Thr Glu Ser Glu Ser Arg
1 5 10 15

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<400> 304

Ile Thr Gly Cys Pro Thr Glu Ser Glu Ser Arg Leu Val Asn Gln
1 5 10 15

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<400> 305

Pro Thr Glu Ser Glu Ser Arg Leu Val Asn Gln Ile Ile Glu Glu
1 5 10 15

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<400> 306

Glu Ser Arg Leu Val Asn Gln Ile Ile Glu Glu Met Ile Lys Lys
1 5 10 15

<210> 307
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Val Asn Gln Ile Ile Glu Glu Met Ile Lys Lys Ser Glu Ile Tyr
1 5 10 15

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<400> 308

Ile Glu Glu Met Ile Lys Lys Ser Glu Ile Tyr Val Ala Trp Val
1 5 10 15

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<400> 309

Ile Lys Lys Ser Glu Ile Tyr Val Ala Trp Val Pro Ala His Lys
1 5 10 15

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<400> 310

Glu Ile Tyr Val Ala Trp Val Pro Ala His Lys Gly Ile Gly Gly
1 5 10 15

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<400> 311

Ala Trp Val Pro Ala His Lys Gly Ile Gly Gly Asn Gln Glu Ile
1 5 10 15

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<400> 312

Ala His Lys Gly Ile Gly Gly Asn Gln Glu Ile Asp His Leu Val
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<400> 313

Ile Gly Gly Asn Gln Glu Ile Asp His Leu Val Ser Gln Gly Ile
1 5 10 15

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<400> 314

Gln Glu Ile Asp His Leu Val Ser Gln Gly Ile Arg Gln Val Leu
1 5 10 15

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<400> 316

Gln Gly Ile Arg Gln Val Leu Phe Leu Glu Lys Ile Glu Pro Ala
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<400> 317

Gln Val Leu Phe Leu Glu Lys Ile Glu Pro Ala Gln Glu Glu His
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<400> 318

Leu Glu Lys Ile Glu Pro Ala Gln Glu Glu His Asp Lys Tyr His
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Glu Pro Ala Gln Glu Glu His Asp Lys Tyr His Ser Asn Val Lys
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Glu Glu His Asp Lys Tyr His Ser Asn Val Lys Glu Leu Val Phe
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<400> 321

Lys Tyr His Ser Asn Val Lys Glu Leu Val Phe Lys Phe Gly Leu

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Asn Val Lys Glu Leu Val Phe Lys Phe Gly Leu Pro Arg Ile Val
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<400> 323

Leu Val Phe Lys Phe Gly Leu Pro Arg Ile Val Ala Arg Gln Ile
1 5 10 15

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<400> 324

Phe Gly Leu Pro Arg Ile Val Ala Arg Gln Ile Val Asp Thr Cys
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Arg Ile Val Ala Arg Gln Ile Val Asp Thr Cys Asp Lys Cys His
1 5 10 15

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Asn Phe Arg Val Tyr Tyr Arg Glu Gly Arg Asp Gln Leu Trp Lys
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Tyr Tyr Arg Glu Gly Arg Asp Gln Leu Trp Lys Gly Pro Gly Glu
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Ile Ser Leu Trp Asp Gln Ser Leu Glu Pro Cys Val Lys Leu Thr
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Asp Gln Ser Leu Glu Pro Cys Val Lys Leu Thr Pro Leu Cys Val
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Glu Pro Cys Val Lys Leu Thr Pro Leu Cys Val Thr Leu His Cys
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Leu His Cys Thr Asn Leu Glu Asn Ala Thr Asn Thr Ser Ser
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Asn Leu Glu Asn Ala Thr Asn Thr Ser Ser Asn Trp Lys Glu

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Ala Thr Asn Thr Thr Ser Ser Asn Trp Lys Glu Met Asn Arg Gly
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Trp Lys Glu Met Asn Arg Gly Glu Ile Lys Asn Cys Ser Phe Asn
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Ser Phe Glu Pro Ile Pro Ile His Tyr Cys Ala Pro Ala Gly Phe
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Ala Gly Phe Ala Ile Leu Lys Cys Asn Asp Lys Lys Phe Asn Gly
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Val Thr Lys Leu Gln Ala Gln Phe Glu Asn Lys Thr Ile Val Phe
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Gly Gly Asp Pro Glu Ile Val Met His Ser Phe Asn Cys Gly Gly
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Thr Trp Asn Asn Thr Ile Gly Pro Asn Asn Thr Asn Gly Thr Ile
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Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Pro Pro Ile Arg Gly
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Gly Lys Ala Met Tyr Ala Pro Pro Ile Arg Gly Gln Ile Arg Cys
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Tyr Ala Pro Pro Ile Arg Gly Gln Ile Arg Cys Ser Ser Asn Ile
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Ile Arg Gly Gln Ile Arg Cys Ser Ser Asn Ile Thr Gly Leu Leu
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Thr Arg Asp Gly Gly Arg Glu Val Gly Asn Thr Thr Glu Ile Phe
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Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val
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Asn Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu
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Pro Thr Lys Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala
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Val Gln Arg Glu Lys Arg Ala Val Thr Leu Gly Ala Val Phe Leu
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Lys Arg Ala Val Thr Leu Gly Ala Val Phe Leu Gly Phe Leu Gly
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Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met Gly Ala
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1 5 10 15

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Met Gly Ala Ala Ser Leu Thr Leu Thr Val Gln Ala Arg Gln Leu
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Arg Ala Ile Glu Ala Gln Gln Arg Leu Leu Gln Leu Thr Val Trp
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Ala Gln Gln Arg Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
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Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln Gln Leu Leu Gly
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Glu Arg Tyr Leu Lys Asp Gln Gln Leu Leu Gly Ile Trp Gly Cys
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Lys Asp Gln Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu
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Gly Lys Leu Ile Cys Thr Thr Ala Val Pro Trp Asn Ala Ser Trp
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Cys Thr Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser
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Asn Asn Met Thr Trp Met Glu Trp Glu Arg Glu Ile Gly Asn Tyr

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Glu Arg Glu Ile Gly Asn Tyr Thr Asn Leu Ile Tyr Thr Leu Ile
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Gly Asn Tyr Thr Asn Leu Ile Tyr Thr Leu Ile Glu Glu Ser Gln
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Asn Leu Ile Tyr Thr Leu Ile Glu Glu Ser Gln Asn Gln Gln Glu
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Glu Ser Gln Asn Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu
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1 5 10 15

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Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser Leu Trp Asn Trp Leu
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Gly Leu Val Gly Leu Arg Ile Val Phe Thr Val Leu Ser Ile Val
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Arg Val Arg Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Phe
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Glu Glu Gly Gly Glu Arg Asp Arg Asp Arg Ser Arg Pro Leu Val
1 5 10 15

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Glu Arg Asp Arg Asp Arg Ser Arg Pro Leu Val His Gly Leu Leu
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Asp Arg Ser Arg Pro Leu Val His Gly Leu Leu Ala Leu Ile Trp
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Pro Leu Val His Gly Leu Leu Ala Leu Ile Trp Asp Asp Leu Arg
1 5 10 15

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Gly Leu Leu Ala Leu Ile Trp Asp Asp Leu Arg Ser Leu Cys Leu
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1 5 10 15

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Ser Tyr His Arg Leu Arg Asp Leu Ile Leu Ile Ala Ala Arg Ile
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Leu Arg Asp Leu Ile Leu Ile Ala Ala Arg Ile Val Glu Leu Leu
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Ala Arg Ile Val Glu Leu Leu Gly Arg Arg Gly Trp Glu Ala Leu
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Glu Leu Leu Gly Arg Arg Gly Trp Glu Ala Leu Lys Tyr Trp Gly
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Glu Ala Leu Lys Tyr Trp Gly Asn Leu Leu Gln Tyr Trp Ile Gln
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Ala Val Ser Leu Phe Gly Ala Ile Ala Ile Ala Val Ala Glu Gly
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Ala Glu Gly Thr Asp Arg Ile Ile Glu Val Ala Gln Arg Ile Gly
1 5 10 15

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Asp Arg Ile Ile Glu Val Ala Gln Arg Ile Gly Arg Ala Phe Leu
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Glu Val Ala Gln Arg Ile Gly Arg Ala Phe Leu His Ile Pro Arg
1 5 10 15

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Ser Gly Gly Glu Leu Asp Arg Trp Glu Lys Ile Arg Leu Arg Pro
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Leu Asp Arg Trp Glu Lys Ile Arg Leu Arg Pro Gly Gly Lys Lys
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Glu Lys Ile Arg Leu Arg Pro Gly Gly Lys Lys Lys Tyr Lys Leu
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Leu Arg Pro Gly Gly Lys Lys Tyr Lys Leu Lys His Ile Val

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Gly Lys Lys Lys Tyr Lys Leu Lys His Ile Val Trp Ala Ser Arg
1 5 10 15

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Tyr Lys Leu Lys His Ile Val Trp Ala Ser Arg Glu Leu Glu Arg
1 5 10 15

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His Ile Val Trp Ala Ser Arg Glu Leu Glu Arg Phe Ala Val Asn
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Ala Ser Arg Glu Leu Glu Arg Phe Ala Val Asn Pro Gly Leu Leu
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Glu Leu Glu Arg Phe Ala Val Asn Pro Gly Leu Leu Glu Thr Ser
1 5 10 15

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Phe Ala Val Asn Pro Gly Leu Leu Glu Thr Ser Glu Gly Cys Arg
1 5 10 15

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<400> 633

Pro Gly Leu Leu Glu Thr Ser Glu Gly Cys Arg Gln Ile Leu Gly
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1 5 10 15

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Gly Cys Arg Gln Ile Leu Gly Gln Leu Gln Pro Ser Leu Gln Thr
1 5 10 15

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Leu Gln Thr Gly Ser Glu Glu Leu Arg Ser Leu Tyr Asn Thr Val
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<400> 639

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Arg Ser Leu Tyr Asn Thr Val Ala Thr Leu Tyr Cys Val His Gln
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Asn Thr Val Ala Thr Leu Tyr Cys Val His Gln Arg Ile Glu Val
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Thr Leu Tyr Cys Val His Gln Arg Ile Glu Val Lys Asp Thr Lys
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<223> HIV-1 gag peptide 23

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Val His Gln Arg Ile Glu Val Lys Asp Thr Lys Glu Ala Leu Glu
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Ile Glu Val Lys Asp Thr Lys Glu Ala Leu Glu Lys Ile Glu Glu
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<220>

<223> HIV-1 gag peptide 25

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Asp Thr Lys Glu Ala Leu Glu Lys Ile Glu Glu Glu Gln Asn Lys
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<220>

<223> HIV-1 gag peptide 26

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Ala Leu Glu Lys Ile Glu Glu Glu Gln Asn Lys Ser Lys Lys Lys
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<220>

<223> HIV-1 gag peptide 27

<400> 647

Ile Glu Glu Glu Gln Asn Lys Ser Lys Lys Lys Ala, Gln Gln Ala
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<220>

<223> HIV-1 gag peptide 28

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Gln Asn Lys Ser Lys Lys Ala Gln Gln Ala Ala Ala Asp Thr
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Glu Pro Phe Arg Asp Tyr Val Asp Arg Phe Tyr Lys Thr Leu Arg
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Glu Gly His Ile Ala Lys Asn Cys Arg Ala Pro Arg Lys Lys Gly
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1 5 10 15

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Ser Phe Arg Phe Gly Glu Glu Thr Thr Pro Ser Gln Lys Gln
1 5 10 15

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1 5 10 15

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1 5 10 15

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Gly Val Gly Ala Val Ser Arg Asp Leu Glu Lys His Gly Ala Ile
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Ser Ser Glu Gln Thr Arg Ala Asn Ser Pro Thr Arg Arg Glu Leu
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Arg Glu Leu Gln Val Trp Gly Arg Asp Asn Asn Ser Leu Ser Glu
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Val Trp Gly Arg Asp Asn Asn Ser Leu Ser Glu Ala Gly Ala Asp
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10

15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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Glu Ile Cys Gly His Lys Ala Ile Gly Thr Val Leu Val Gly Pro
1 5 10 15

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Gly Pro Lys Val Lys Gln Trp Pro Leu Thr Glu Glu Lys Ile Lys
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1 5 10 15

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1 5 10 15

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1 5 10 15

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Asn Pro Tyr Asn Thr Pro Val Phe Ala Ile Lys Lys Lys Asp Ser
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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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Glu Ser Thr His Pro Arg Ile Ser Ser Glu Val His Ile Pro Leu
1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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Trp Arg Lys Lys Arg Tyr Ser Thr Gln Val Asp Pro Asp Leu Ala

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15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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Lys Lys Ile Lys Pro Pro Leu Pro Ser Val Thr Lys Leu Thr Glu
1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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1 5 10 15

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<220>

<223> HIV-1 vpu peptide 14

<400> 1175

Ser Gly Asn Glu Ser Glu Gly Asp Gln Glu Glu Leu Ser Ala Leu

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<210> 1176
<211> 15
<212> PRT
<213> Artificial

<220>
<223> HIV-1 vpu peptide 15

<400> 1176

Ser Glu Gly Asp Gln Glu Glu Leu Ser Ala Leu Val Glu Met Gly
1 5 10 15

<210> 1177
<211> 15
<212> PRT
<213> Artificial

<220>
<223> HIV-1 vpu peptide 16

<400> 1177

Gln Glu Glu Leu Ser Ala Leu Val Glu Met Gly His His Ala Pro
1 5 10 15

<210> 1178
<211> 15
<212> PRT
<213> Artificial

<220>
<223> HIV-1 vpu peptide 17

<400> 1178

Ser Ala Leu Val Glu Met Gly His His Ala Pro Trp Asp Val Asp
1 5 10 15

<210> 1179
<211> 13
<212> PRT
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<220>
<223> HIV-1 vpu peptide 18

<400> 1179

Glu Met Gly His His Ala Pro Trp Asp Val Asp Asp Leu
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<210> 1180
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<212> PRT
<213> Hepatitis C virus

<400> 1180

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg

<210> 1181
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1181

Gln Arg Lys Thr Lys Arg Asn Thr Asn Arg Arg Pro Gln Asp Val Lys
1 5 10 15

Phe Pro

<210> 1182
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1182

.Thr Asn Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile
1 5 10 15

Val Gly

<210> 1183
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1183

Val Lys Phe Pro Gly Gly Gln Ile Val Gly Gly Val Tyr Leu Leu
1 5 10 15

Pro Arg

<210> 1184
<211> 18
<212> PRT

<213> Hepatitis C virus

<400> 1184

Gln Ile Val Gly Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu
1 5 10 15

Gly Val

<210> 1185

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1185

Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala Thr Arg Lys
1 5 10 15

Thr Ser

<210> 1186

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1186

Arg Leu Gly Val Arg Ala Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro
1 5 10 15

Arg Gly

<210> 1187

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1187

Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro Ile
1 5 10 15

Pro Lys

<210> 1188

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1188

Gln Pro Arg Gly Arg Arg Gln Pro Ile Pro Lys Ala Arg Arg Pro Glu
1 5 10 15

Gly Arg

<210> 1189
<211> 18
<212> PRT
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<400> 1189

Pro Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro
1 5 10 15

Gly Tyr

<210> 1190
<211> 18
<212> PRT
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<400> 1190

Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly Tyr Pro Trp Pro Leu Tyr
1 5 10 15

Gly Asn

<210> 1191
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1191

Gln Pro Gly Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp
1 5 10 15

Ala Gly

<210> 1192
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1192

Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp Leu Leu Ser Pro
1 5 10 15

Arg Gly

<210> 1193

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1193

Gly Trp Ala Gly Trp Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp
1 5 10 15

Gly Pro

<210> 1194

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1194

Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro Arg Arg
1 5 10 15

Arg Ser

<210> 1195

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1195

Ser Trp Gly Pro Thr Asp Pro Arg Arg Arg Ser Arg Asn Leu Gly Lys
1 5 10 15

Val Ile

<210> 1196

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1196

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
1 5 10 15

Gly Phe

<210> 1197
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1197

Gly Lys Val Ile Asp Thr Leu Thr Cys Gly Phe Ala Asp Leu Met Gly
1 5 10 15

Tyr Ile

<210> 1198
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1198

Thr Cys Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala
1 5 10 15

Pro Leu

<210> 1199
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1199

Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu Gly Gly Ala Ala Arg
1 5 10 15

Ala Leu

<210> 1200
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1200

Gly Ala Pro Leu Gly Gly Ala Ala Arg Ala Leu Ala His Gly Val Arg
1 5 10 15

Val Leu

<210> 1201
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1201

Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn
1 5 10 15

Tyr Ala

<210> 1202
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1202

Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro
1 5 10 15

Gly Cys

<210> 1203
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1203

Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe
1 5 10 15

Leu Leu

<210> 1204
<211> 15
<212> PRT
<213> Hepatitis C virus

<400> 1204

Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu Leu Ser

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<210> 1205
<211> 14
<212> PRT
<213> Hepatitis C virus

<400> 1205

Ser Phe Ser Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr
1 5 10

<210> 1206
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1206

Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
1 5 10 15

Tyr Gln

<210> 1207
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1207

Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Gln Val Arg Asn Ser Ser
1 5 10 15

Gly Leu

<210> 1208
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1208

Ser Ala Tyr Gln Val Arg Asn Ser Ser Gly Leu Tyr His Val Thr Asn
1 5 10 15

Asp Cys

<210> 1209
<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1209

Ser Ser Gly Leu Tyr His Val Thr Asn Asp Cys Pro Asn Ser Ser Ile
1 5 10 15

Val Tyr

<210> 1210

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1210

Thr Asn Asp Cys Pro Asn Ser Ser Ile Val Tyr Glu Ala Ala Asp Ala
1 5 10 15

Ile Leu

<210> 1211

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1211

Ser Ile Val Tyr Glu Ala Ala Asp Ala Ile Leu His Thr Pro Gly Cys
1 5 10 15

Val Pro

<210> 1212

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1212

Asp Ala Ile Leu His Thr Pro Gly Cys Val Pro Cys Val Arg Glu Gly
1 5 10 15

Asn Ala

<210> 1213

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1213

Gly Cys Val Pro Cys Val Arg Glu Gly Asn Ala Ser Arg Cys Trp Val
1 5 10 15

Ala Val

<210> 1214

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1214

Glu Gly Asn Ala Ser Arg Cys Trp Val Ala Val Thr Pro Thr Val Ala
1 5 10 15

Thr Arg

<210> 1215

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1215

Trp Val Ala Val Thr Pro Thr Val Ala Thr Arg Asp Gly Lys Leu Pro
1 5 10 15

Thr Thr

<210> 1216

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1216

Val Ala Thr Arg Asp Gly Lys Leu Pro Thr Thr Gln Leu Arg Arg His
1 5 10 15

Ile Asp

<210> 1217

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1217

Leu Pro Thr Thr Gln Leu Arg Arg His Ile Asp Leu Leu Val Gly Ser
1 5 10 15

Ala Thr

<210> 1218

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1218

Arg His Ile Asp Leu Leu Val Gly Ser Ala Thr Leu Cys Ser Ala Leu
1 5 10 15

Tyr Val

<210> 1219

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1219

Gly Ser Ala Thr Leu Cys Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly
1 5 10 15

Ser Val

<210> 1220

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1220

Ala Leu Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val Gly Gln
1 5 10 15

Leu Phe

<210> 1221

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1221

Cys Gly Ser Val Phe Leu Val Gly Gln Leu Phe Thr Phe Ser Pro Arg
1 5 10 15

Arg His

<210> 1222

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1222

Gly Gln Leu Phe Thr Phe Ser Pro Arg Arg His Trp Thr Thr Gln Asp
1 5 10 15

Cys Asn

<210> 1223

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1223

Pro Arg Arg His Trp Thr Thr Gln Asp Cys Asn Cys Ser Ile Tyr Pro
1 5 10 15

Gly His

<210> 1224

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1224

Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg
1 5 10 15

Met Ala

<210> 1225

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1225

Tyr Pro Gly His Ile Thr Gly His Arg Met Ala Trp Asp Met Met Met
1 5 10 15

Asn Trp

<210> 1226
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1226

His Arg Met Ala Trp Asp Met Met Met Asn Trp Ser Pro Thr Ala Ala
1 5 10 15

Leu Val

<210> 1227
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1227

Met Met Asn Trp Ser Pro Thr Ala Ala Leu Val Val Ala Gln Leu Leu
1 5 10 15

Arg Ile

<210> 1228
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1228

Ala Ala Leu Val Val Ala Gln Leu Leu Arg Ile Pro Gln Ala Ile Met
1 5 10 15

Asp Met

<210> 1229
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1229

Leu Leu Arg Ile Pro Gln Ala Ile Met Asp Met Ile Ala Gly Ala His
1 5 10 15

Trp Gly

<210> 1230
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1230

Ile Met Asp Met Ile Ala Gly Ala His Trp Gly Val Leu Ala Gly Ile
1 5 10 15

Ala Tyr

<210> 1231
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1231

Ala His Trp Gly Val Leu Ala Gly Ile Ala Tyr Phe Ser Met Val Gly
1 5 10 15

Asn Trp

<210> 1232
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1232

Gly Ile Ala Tyr Phe Ser Met Val Gly Asn Trp Ala Lys Val Leu Val
1 5 10 15

Val Leu

<210> 1233
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1233

Val Gly Asn Trp Ala Lys Val Leu Val Leu Leu Phe Ala Gly

1

5

10

15

Val Asp

<210> 1234
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1234

Leu Val Val Leu Leu Leu Phe Ala Gly Val Asp Ala Glu Thr His Val
1 5 10 15

Thr Gly

<210> 1235
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1235

Ala Gly Val Asp Ala Glu Thr His Val Thr Gly Gly Ser Ala Gly Arg
1 5 10 15

Thr Thr

<210> 1236
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1236

His Val Thr Gly Gly Ser Ala Gly Arg Thr Thr Ala Gly Leu Val Gly
1 5 10 15

Leu Leu

<210> 1237
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1237

Gly Arg Thr Thr Ala Gly Leu Val Gly Leu Leu Thr Pro Gly Ala Lys
1 5 10 15

Gln Asn

<210> 1238
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1238

Val Gly Leu Leu Thr Pro Gly Ala Lys Gln Asn Ile Gln Leu Ile Asn
1 5 10 15

Thr Asn

<210> 1239
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1239

Ala Lys Gln Asn Ile Gln Leu Ile Asn Thr Asn Gly Ser Trp His Ile
1 5 10 15

Asn Ser

<210> 1240
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1240

Ile Asn Thr Asn Gly Ser Trp His Ile Asn Ser Thr Ala Leu Asn Cys
1 5 10 15

Asn Glu

<210> 1241
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1241

His Ile Asn Ser Thr Ala Leu Asn Cys Asn Glu Ser Leu Asn Thr Gly
1 5 10 15

Trp Leu

<210> 1242
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1242

Asn Cys Asn Glu Ser Leu Asn Thr Gly Trp Leu Ala Gly Leu Phe Tyr
1 5 10 15

Gln His

<210> 1243
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1243

Thr Gly Trp Leu Ala Gly Leu Phe Tyr Gln His Lys Phe Asn Ser Ser
1 5 10 15

Gly Cys

<210> 1244
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1244

Phe Tyr Gln His Lys Phe Asn Ser Ser Gly Cys Pro Glu Arg Leu Ala
1 5 10 15

Ser Cys

<210> 1245
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1245

Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys Arg Arg Leu Thr Asp
1 5 10 15

Phe Ala

<210> 1246
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1246

Leu Ala Ser Cys Arg Arg Leu Thr Asp Phe Ala Gln Gly Trp Gly Pro
1 5 10 15

Ile Ser

<210> 1247
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1247

Thr Asp Phe Ala Gln Gly Trp Gly Pro Ile Ser Tyr Ala Asn Gly Ser
1 5 10 15

Gly Leu

<210> 1248
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1248

Gly Pro Ile Ser Tyr Ala Asn Gly Ser Gly Leu Asp Glu Arg Pro Tyr
1 5 10 15

Cys Trp

<210> 1249
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1249

Gly Ser Gly Leu Asp Glu Arg Pro Tyr Cys Trp His Tyr Pro Pro Arg
1 5 10 15

Pro Cys

<210> 1250
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1250

Pro Tyr Cys Trp His Tyr Pro Pro Arg Pro Cys Gly Ile Val Pro Ala
1 5 10 15

Lys Ser

<210> 1251
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1251

Pro Arg Pro Cys Gly Ile Val Pro Ala Lys Ser Val Cys Gly Pro Val
1 5 10 15

Tyr Cys

<210> 1252
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1252

Pro Ala Lys Ser Val Cys Gly Pro Val Tyr Cys Phe Thr Pro Ser Pro
1 5 10 15

Val Val

<210> 1253
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1253

Pro Val Tyr Cys Phe Thr Pro Ser Pro Val Val Val Gly Thr Thr Asp
1 5 10 15

Arg Ser

<210> 1254
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1254

Ser Pro Val Val Val Gly Thr Thr Asp Arg Ser Gly Ala Pro Thr Tyr
1 5 10 15

Ser Trp

<210> 1255
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1255

Thr Asp Arg Ser Gly Ala Pro Thr Tyr Ser Trp Gly Ala Asn Asp Thr
1 5 10 15

Asp Val

<210> 1256
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1256

Thr Tyr Ser Trp Gly Ala Asn Asp Thr Asp Val Phe Val Leu Asn Asn
1 5 10 15

Thr Arg

<210> 1257
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1257

Asp Thr Asp Val Phe Val Leu Asn Asn Thr Arg Pro Pro Leu Gly Asn
1 5 10 15

Trp Phe

<210> 1258
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1258

Asn Asn Thr Arg Pro Pro Leu Gly Asn Trp Phe Gly Cys Thr Trp Met
1 5 10 15

Asn Ser

<210> 1259
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1259

Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Ser Thr Gly Phe Thr Lys
1 5 10 15

Val Cys

<210> 1260
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1260

Trp Met Asn Ser Thr Gly Phe Thr Lys Val Cys Gly Ala Pro Pro Cys
1 5 10 15

Val Ile

<210> 1261
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1261

Thr Lys Val Cys Gly Ala Pro Pro Cys Val Ile Gly Gly Val Gly Asn
1 5 10 15

Asn Thr

<210> 1262
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1262

Pro Cys Val Ile Gly Gly Val Gly Asn Asn Thr Leu Leu Cys Pro Thr
1 5 10 15

Asp Cys

<210> 1263
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1263

Gly Asn Asn Thr Leu Leu Cys Pro Thr Asp Cys Phe Arg Lys His Pro
1 5 10 15

Glu Ala

<210> 1264
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1264

Pro Thr Asp Cys Phe Arg Lys His Pro Glu Ala Thr Tyr Ser Arg Cys
1 5 10 15

Gly Ser

<210> 1265
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1265

His Pro Glu Ala Thr Tyr Ser Arg Cys Gly Ser Gly Pro Trp Ile Thr
1 5 10 15

Pro Arg

<210> 1266

<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1266

Arg Cys Gly Ser Gly Pro Trp Ile Thr Pro Arg Cys Met Val Asp Tyr
1 5 10 15

Pro Tyr

<210> 1267
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1267

Ile Thr Pro Arg Cys Met Val Asp Tyr Pro Tyr Arg Leu Trp His Tyr
1 5 10 15

Pro Cys

<210> 1268
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1268

Asp Tyr Pro Tyr Arg Leu Trp His Tyr Pro Cys Thr Ile Asn Tyr Thr
1 5 10 15

Ile Phe

<210> 1269
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1269

His Tyr Pro Cys Thr Ile Asn Tyr Thr Ile Phe Lys Val Arg Met Tyr
1 5 10 15

Val Gly

<210> 1270
<211> 18

<212> PRT
<213> Hepatitis C virus

<400> 1270

Tyr Thr Ile Phe Lys Val Arg Met Tyr Val Gly Gly Val Glu His Arg
1 5 10 15

Leu Glu

<210> 1271
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1271

Met Tyr Val Gly Gly Val Glu His Arg Leu Glu Ala Ala Cys Asn Trp
1 5 10 15

Thr Arg

<210> 1272
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1272

His Arg Leu Glu Ala Ala Cys Asn Trp Thr Arg Gly Glu Arg Cys Asp
1 5 10 15

Leu Glu

<210> 1273
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1273

Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp Arg Ser
1 5 10 15

Glu Leu

<210> 1274
<211> 18
<212> PRT

<213> Hepatitis C virus

<400> 1274

Cys Asp Leu Glu Asp Arg Asp Arg Ser Glu Leu Ser Pro Leu Leu Leu
1 5 10 15

Ser Thr

<210> 1275

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1275

Arg Ser Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Gln Trp Gln Val
1 5 10 15

Leu Pro

<210> 1276

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1276

Leu Leu Ser Thr Thr Gln Trp Gln Val Leu Pro Cys Ser Phe Thr Thr
1 5 10 15

Leu Pro

<210> 1277

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1277

Gln Val Leu Pro Cys Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr Gly
1 5 10 15

Leu Ile

<210> 1278

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1278

Thr Thr Leu Pro Ala Leu Ser Thr Gly Leu Ile His Leu His Gln Asn
1 5 10 15

Ile Val

<210> 1279

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1279

Thr Gly Leu Ile His Leu His Gln Asn Ile Val Asp Val Gln Tyr Leu
1 5 10 15

Tyr Gly

<210> 1280

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1280

Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly Val Gly Ser Ser Ile
1 5 10 15

Ala Ser

<210> 1281

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1281

Tyr Leu Tyr Gly Val Gly Ser Ser Ile Ala Ser Trp Ala Ile Lys Trp
1 5 10 15

Glu Tyr

<210> 1282

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1282

Ser Ile Ala Ser Trp Ala Ile Lys Trp Glu Tyr Val Val Leu Leu Phe
1 5 10 15

Leu Leu

<210> 1283

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1283

Lys Trp Glu Tyr Val Val Leu Leu Phe Leu Leu Leu Ala Asp Ala Arg
1 5 10 15

Val Cys

<210> 1284

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1284

Leu Phe Leu Leu Ala Asp Ala Arg Val Cys Ser Cys Leu Trp Met
1 5 10 15

Met Leu

<210> 1285

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1285

Ala Arg Val Cys Ser Cys Leu Trp Met Met Leu Leu Ile Ser Gln Ala
1 5 10 15

Glu Ala

<210> 1286

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1286

Trp Met Met Leu Leu Ile Ser Gln Ala Glu Ala Ala Leu Glu Asn Leu
1 5 10 15

Val Ile

<210> 1287
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1287

Gln Ala Glu Ala Ala Leu Glu Asn Leu Val Ile Leu Asn Ala Ala Ser
1 5 10 15

Leu Ala

<210> 1288
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1288

Asn Leu Val Ile Leu Asn Ala Ala Ser Leu Ala Gly Thr His Gly Leu
1 5 10 15

Val Ser

<210> 1289
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1289

Ala Ser Leu Ala Gly Thr His Gly Leu Val Ser Phe Leu Val Phe Phe
1 5 10 15

Cys Phe

<210> 1290
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1290

Gly Leu Val Ser Phe Leu Val Phe Phe Cys Phe Ala Trp Tyr Leu Lys
1 5 10 15

Gly Arg

<210> 1291
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1291

Phe Phe Cys Phe Ala Trp Tyr Leu Lys Gly Arg Trp Val Pro Gly Ala
1 5 10 15

Val Tyr

<210> 1292
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1292

Leu Lys Gly Arg Trp Val Pro Gly Ala Val Tyr Ala Phe Tyr Gly Met
1 5 10 15

Trp Pro

<210> 1293
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1293

Gly Ala Val Tyr Ala Phe Tyr Gly Met Trp Pro Leu Leu Leu Leu Leu
1 5 10 15

Leu Ala

<210> 1294
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1294

Gly Met Trp Pro Leu Leu Leu Leu Leu Ala Leu Pro Gln Arg Ala

1

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10

15

Tyr Ala

<210> 1295
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1295

Leu Leu Leu Ala Leu Pro Gln Arg Ala Tyr Ala Leu Asp Thr Glu Val
1 5 10 15

Ala Ala

<210> 1296
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1296

Arg Ala Tyr Ala Leu Asp Thr Glu Val Ala Ala Ser Cys Gly Gly Val
1 5 10 15

Val Leu

<210> 1297
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1297

Glu Val Ala Ala Ser Cys Gly Gly Val Val Leu Val Gly Leu Met Ala
1 5 10 15

Leu Thr

<210> 1298
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1298

Gly Val Val Leu Val Gly Leu Met Ala Leu Thr Leu Ser Pro Tyr Tyr
1 5 10 15

Lys Arg

<210> 1299
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1299

Met Ala Leu Thr Leu Ser Pro Tyr Tyr Lys Arg Tyr Ile Ser Trp Cys
1 5 10 15

Met Trp

<210> 1300
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1300

Tyr Tyr Lys Arg Tyr Ile Ser Trp Cys Met Trp Trp Leu Gln Tyr Phe
1 5 10 15

Leu Thr

<210> 1301
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1301

Trp Cys Met Trp Trp Leu Gln Tyr Phe Leu Thr Arg Val Glu Ala Gln
1 5 10 15

Leu His

<210> 1302
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1302

Tyr Phe Leu Thr Arg Val Glu Ala Gln Leu His Val Trp Val Pro Pro
1 5 10 15

Leu Asn

<210> 1303
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1303

Ala Gln Leu His Val Trp Val Pro Pro Leu Asn Val Arg Gly Gly Arg
1 5 10 15

Asp Ala

<210> 1304
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1304

Pro Pro Leu Asn Val Arg Gly Gly Arg Asp Ala Val Ile Leu Leu Met
1 5 10 15

Cys Val

<210> 1305
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1305

Gly Arg Asp Ala Val Ile Leu Leu Met Cys Val Val His Pro Thr Leu
1 5 10 15

Val Phe

<210> 1306
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1306

Leu Met Cys Val Val His Pro Thr Leu Val Phe Asp Ile Thr Lys Leu
1 5 10 15

Leu Leu

<210> 1307
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1307

Thr Leu Val Phe Asp Ile Thr Lys Leu Leu Leu Ala Ile Phe Gly Pro
1 5 10 15

Leu Trp

<210> 1308
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1308

Lys Leu Leu Leu Ala Ile Phe Gly Pro Leu Trp Ile Leu Gln Ala Ser
1 5 10 15

Leu Leu

<210> 1309
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1309

Gly Pro Leu Trp Ile Leu Gln Ala Ser Leu Leu Lys Val Pro Tyr Phe
1 5 10 15

Val Arg

<210> 1310
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1310

Ala Ser Leu Leu Lys Val Pro Tyr Phe Val Arg Val Gln Gly Leu Leu
1 5 10 15

Arg Ile

<210> 1311
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1311

Tyr Phe Val Arg Val Gln Gly Leu Leu Arg Ile Cys Ala Leu Ala Arg
1 5 10 15

Lys Ile

<210> 1312
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1312

Leu Leu Arg Ile Cys Ala Leu Ala Arg Lys Ile Ala Gly Gly His Tyr
1 5 10 15

Val Gln

<210> 1313
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1313

Ala Arg Lys Ile Ala Gly Gly His Tyr Val Gln Met Ala Ile Ile Lys
1 5 10 15

Leu Gly

<210> 1314
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1314

His Tyr Val Gln Met Ala Ile Ile Lys Leu Gly Ala Leu Thr Gly Thr
1 5 10 15

Tyr Val

<210> 1315
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1315

Ile Lys Leu Gly Ala Leu Thr Gly Thr Tyr Val Tyr Asn His Leu Thr
1 5 10 15

Pro Leu

<210> 1316
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1316

Gly Thr Tyr Val Tyr Asn His Leu Thr Pro Leu Arg Asp Trp Ala His
1 5 10 15

Asn Gly

<210> 1317
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1317

Leu Thr Pro Leu Arg Asp Trp Ala His Asn Gly Leu Arg Asp Leu Ala
1 5 10 15

Val Ala

<210> 1318
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1318

Ala His Asn Gly Leu Arg Asp Leu Ala Val Ala Val Glu Pro Val Val
1 5 10 15

Phe Ser

<210> 1319
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1319

Leu Ala Val Ala Val Glu Pro Val Val Phe Ser Arg Met Glu Thr Lys
1 5 10 15

Leu Ile

<210> 1320
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1320

Val Val Phe Ser Arg Met Glu Thr Lys Leu Ile Thr Trp Gly Ala Asp
1 5 10 15

Thr Ala

<210> 1321
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1321

Thr Lys Leu Ile Thr Trp Gly Ala Asp Thr Ala Ala Cys Gly Asp Ile
1 5 10 15

Ile Asn

<210> 1322
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1322

Ala Asp Thr Ala Ala Cys Gly Asp Ile Ile Asn Gly Leu Pro Val Ser
1 5 10 15

Ala Arg

<210> 1323
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1323

Asp Ile Ile Asn Gly Leu Pro Val Ser Ala Arg Arg Gly Gln Glu Ile
1 5 10 15

Leu Leu

<210> 1324
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1324

Val Ser Ala Arg Arg Gly Gln Glu Ile Leu Leu Gly Pro Ala Asp Gly
1 5 10 15

Met Val

<210> 1325
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1325

Glu Ile Leu Leu Gly Pro Ala Asp Gly Met Val Ser Lys Gly Trp Arg
1 5 10 15

Leu Leu

<210> 1326
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1326

Asp Gly Met Val Ser Lys Gly Trp Arg Leu Leu Ala Pro Ile Thr Ala
1 5 10 15

Tyr Ala

<210> 1327

<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1327

Trp Arg Leu Leu Ala Pro Ile Thr Ala Tyr Ala Gln Gln Thr Arg Gly
1 5 10 15

Leu Leu

<210> 1328
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1328

Thr Ala Tyr Ala Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile Ile Thr
1 5 10 15

Ser Leu

<210> 1329
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1329

Arg Gly Leu Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly Arg Asp Lys
1 5 10 15

Asn Gln

<210> 1330
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1330

Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly Glu Val
1 5 10 15

Gln Ile

<210> 1331
<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1331

Asp Lys Asn Gln Val Glu Gly Glu Val Gln Ile Val Ser Thr Ala Thr
1 5 10 15

Gln Thr

<210> 1332

<211> 15

<212> PRT

<213> Hepatitis C virus

<400> 1332

Glu Val Gln Ile Val Ser Thr Ala Thr Gln Thr Phe Leu Ala Thr
1 5 10 15

<210> 1333

<211> 14

<212> PRT

<213> Hepatitis C virus

<400> 1333

Val Ser Thr Ala Thr Gln Thr Phe Leu Ala Thr Cys Ile Asn
1 5 10

<210> 1334

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1334

Ala Thr Gln Thr Phe Leu Ala Thr Cys Ile Asn Gly Val Cys Trp Thr
1 5 10 15

Val Tyr

<210> 1335

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1335

Thr Cys Ile Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Thr
1 5 10 15

Arg Thr

<210> 1336
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1336

Trp Thr Val Tyr His Gly Ala Gly Thr Arg Thr Ile Ala Ser Pro Lys
1 5 10 15

Gly Pro

<210> 1337
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1337

Gly Thr Arg Thr Ile Ala Ser Pro Lys Gly Pro Val Ile Gln Met Tyr
1 5 10 15

Thr Asn

<210> 1338
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1338

Pro Lys Gly Pro Val Ile Gln Met Tyr Thr Asn Val Asp Gln Asp Leu
1 5 10 15

Val Gly

<210> 1339
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1339

Met Tyr Thr Asn Val Asp Gln Asp Leu Val Gly Trp Pro Ala Pro Gln
1 5 10 15

Gly Ser

<210> 1340
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1340

Asp Leu Val Gly Trp Pro Ala Pro Gln Gly Ser Arg Ser Leu Thr Pro
1 5 10 15

Cys Thr

<210> 1341
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1341

Pro Gln Gly Ser Arg Ser Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp
1 5 10 15

Leu Tyr

<210> 1342
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1342

Thr Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His
1 5 10 15

Ala Asp

<210> 1343
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1343

Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val Ile Pro Val Arg
1 5 10 15

Arg Arg

<210> 1344
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1344

Arg His Ala Asp Val Ile Pro Val Arg Arg Arg Gly Asp Ser Arg Gly
1 5 10 15

Ser Leu

<210> 1345
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1345

Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro Arg Pro
1 5 10 15

Ile Ser

<210> 1346
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1346

Arg Gly Ser Leu Leu Ser Pro Arg Pro Ile Ser Tyr Leu Lys Gly Ser
1 5 10 15

Ser Gly

<210> 1347
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1347

Arg Pro Ile Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys
1 5 10 15

Pro Ala

<210> 1348
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1348

Gly Ser Ser Gly Gly Pro Leu Leu Cys Pro Ala Gly His Ala Val Gly
1 5 10 15

Leu Phe

<210> 1349
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1349

Leu Cys Pro Ala Gly His Ala Val Gly Leu Phe Arg Ala Ala Val Cys
1 5 10 15

Thr Arg

<210> 1350
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1350

Val Gly Leu Phe Arg Ala Ala Val Cys Thr Arg Gly Val Ala Lys Ala
1 5 10 15

Val Asp

<210> 1351
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1351

Val Cys Thr Arg Gly Val Ala Lys Ala Val Asp Phe Ile Pro Val Glu
1 5 10 15

Asn Leu

<210> 1352
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1352

Lys Ala Val Asp Phe Ile Pro Val Glu Asn Leu Glu Thr Thr Met Arg
1 5 10 15

Ser Pro

<210> 1353
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1353

Val Glu Asn Leu Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn
1 5 10 15

Ser Ser

<210> 1354
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1354

Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val Pro
1 5 10 15

Gln Ser

<210> 1355
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1355

Asp Asn Ser Ser Pro Pro Ala Val Pro Gln Ser Phe Gln Val Ala His
1 5 10 15

Leu His

<210> 1356

<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1356

Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser
1 5 10 15

Gly Lys

<210> 1357
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1357

Ala His Leu His Ala Pro Thr Gly Ser Gly Lys Ser Thr Lys Val Pro
1 5 10 15

Ala Ala

<210> 1358
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1358

Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly
1 5 10 15

Tyr Lys

<210> 1359
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1359

Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn
1 5 10 15

Pro Ser

<210> 1360
<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1360

Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu
1 5 10 15

Gly Phe

<210> 1361

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1361

Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser
1 5 10 15

Lys Ala

<210> 1362

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1362

Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His Gly Val Asp Pro
1 5 10 15

Asn Ile

<210> 1363

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1363

Met Ser Lys Ala His Gly Val Asp Pro Asn Ile Arg Thr Gly Val Arg
1 5 10 15

Thr Ile

<210> 1364

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1364

Asp	Pro	Asn	Ile	Arg	Thr	Gly	Val	Arg	Thr	Ile	Thr	Thr	Gly	Ser	Pro
1			5					10						15	

Ile Thr

<210> 1365

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1365

Val	Arg	Thr	Ile	Thr	Thr	Gly	Ser	Pro	Ile	Thr	Tyr	Ser	Thr	Tyr	Gly
1			5					10						15	

Lys Phe

<210> 1366

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1366

Ser	Pro	Ile	Thr	Tyr	Ser	Thr	Tyr	Gly	Lys	Phe	Leu	Ala	Asp	Gly	Gly
1			5					10						15	

Cys Ser

<210> 1367

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1367

Tyr	Gly	Lys	Phe	Leu	Ala	Asp	Gly	Gly	Cys	Ser	Gly	Gly	Ala	Tyr	Asp
1			5					10						15	

Ile Ile

<210> 1368

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1368

Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys
1 5 10 15

His Ser

<210> 1369

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1369

Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser Thr Asp Ala Thr Ser
1 5 10 15

Ile Leu

<210> 1370

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1370

Glu Cys His Ser Thr Asp Ala Thr Ser Ile Leu Gly Ile Gly Thr Val
1 5 10 15

Leu Asp

<210> 1371

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1371

Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala
1 5 10 15

Gly Ala

<210> 1372

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1372

Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu
1 5 10 15

Ala Thr

<210> 1373

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1373

Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro Gly
1 5 10 15

Ser Val

<210> 1374

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1374

Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Ser His Pro
1 5 10 15

Asn Ile

<210> 1375

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1375

Pro Gly Ser Val Thr Val Ser His Pro Asn Ile Glu Glu Val Ala Leu
1 5 10 15

Ser Thr

<210> 1376

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1376

His Pro Asn Ile Glu Glu Val Ala Leu Ser Thr Thr Gly Glu Ile Pro
1 5 10 15

Phe Tyr

<210> 1377
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1377

Ala Leu Ser Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro
1 5 10 15

Leu Glu

<210> 1378
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1378

Ile Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val Ile Lys Gly Gly
1 5 10 15

Arg His

<210> 1379
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1379

Ile Pro Leu Glu Val Ile Lys Gly Gly Arg His Leu Ile Phe Cys His
1 5 10 15

Ser Lys

<210> 1380
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1380

Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys Asp Glu
1 5 10 15

Leu Ala

<210> 1381
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1381

Cys His Ser Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Val Ala
1 5 10 15

Leu Gly

<210> 1382
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1382

Asp Glu Leu Ala Ala Lys Leu Val Ala Leu Gly Ile Asn Ala Val Ala
1 5 10 15

Tyr Tyr

<210> 1383
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1383

Val Ala Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val
1 5 10 15

Ser Val

<210> 1384
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1384

Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly

1

5

10

15

Asp Val

<210> 1385
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1385

Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val Val Val Val Ser Thr
1 5 10 15

Asp Ala

<210> 1386
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1386

Ser Gly Asp Val Val Val Val Ser Thr Asp Ala Leu Met Thr Gly Phe
1 5 10 15

Thr Gly

<210> 1387
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1387

Ser Thr Asp Ala Leu Met Thr Gly Phe Thr Gly Asp Phe Asp Ser Val
1 5 10 15

Ile Asp

<210> 1388
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1388

Gly Phe Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val
1 5 10 15

Thr Gln

<210> 1389
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1389

Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe Ser
1 5 10 15

Leu Asp

<210> 1390
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1390

Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile
1 5 10 15

Glu Thr

<210> 1391
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1391

Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr Thr Leu Pro Gln
1 5 10 15

Asp Ala

<210> 1392
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1392

Thr Ile Glu Thr Thr Leu Pro Gln Asp Ala Val Ser Arg Thr Gln
1 5 10 15

Arg Arg

<210> 1393
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1393

Pro Gln Asp Ala Val Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg
1 5 10 15

Gly Lys

<210> 1394
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1394

Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro Gly Ile Tyr Arg
1 5 10 15

Phe Val

<210> 1395
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1395

Gly Arg Gly Lys Pro Gly Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg
1 5 10 15

Pro Ser

<210> 1396
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1396

Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser
1 5 10 15

Ser Val

<210> 1397
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1397

Glu Arg Pro Ser Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr
1 5 10 15

Asp Ala

<210> 1398
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1398

Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr
1 5 10 15

Glu Leu

<210> 1399
<211> 15
<212> PRT
<213> Hepatitis C virus

<400> 1399

Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu
1 5 10 15

<210> 1400
<211> 14
<212> PRT
<213> Hepatitis C virus

<400> 1400

Gly Cys Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Thr Val
1 5 10

<210> 1401
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1401

Trp Tyr Glu Leu Thr Pro Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr
1 5 10 15

Met Asn

<210> 1402

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1402

Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn Thr Pro Gly Leu Pro
1 5 10 15

Val Cys

<210> 1403

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1403

Ala Tyr Met Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu
1 5 10 15

Phe Trp

<210> 1404

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1404

Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly Val Phe Thr
1 5 10 15

Gly Leu

<210> 1405

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1405

Leu Glu Phe Trp Glu Gly Val Phe Thr Gly Leu Thr His Ile Asp Ala
1 5 10 15

His Phe

<210> 1406
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1406

Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr Lys
1 5 10 15

Gln Ser

<210> 1407
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1407

Asp Ala His Phe Leu Ser Gln Thr Lys Gln Ser Gly Glu Asn Phe Pro
1 5 10 15

Tyr Leu

<210> 1408
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1408

Thr Lys Gln Ser Gly Glu Asn Phe Pro Tyr Leu Val Ala Tyr Gln Ala
1 5 10 15

Thr Val

<210> 1409
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1409

Phe Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val Cys Ala Arg Ala Gln
1 5 10 15

Ala Pro

<210> 1410
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1410

Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp
1 5 10 15

Gln Met

<210> 1411
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1411

Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp Lys Cys Leu Ile
1 5 10 15

Arg Leu

<210> 1412
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1412

Trp Asp Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His
1 5 10 15

Gly Pro

<210> 1413
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1413

Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu Leu Tyr

1

5

10

15

Arg Leu

<210> 1414
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1414

Leu His Gly Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn
1 5 10 15

Glu Val

<210> 1415
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1415

Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val Thr Leu Thr His Pro
1 5 10 15

Ile Thr

<210> 1416
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1416

Gln Asn Glu Val Thr Leu Thr His Pro Ile Thr Lys Tyr Ile Met Thr
1 5 10 15

Cys Met

<210> 1417
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1417

His Pro Ile Thr Lys Tyr Ile Met Thr Cys Met Ser Ala Asp Leu Glu
1 5 10 15

Val Val

<210> 1418
<211> 14
<212> PRT
<213> Hepatitis C virus

<400> 1418

Met Thr Cys Met Ser Ala Asp Leu Glu Val Val Thr Ser Thr
1 5 10

<210> 1419
<211> 14
<212> PRT
<213> Hepatitis C virus

<400> 1419

Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu
1 5 10

<210> 1420
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1420

Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala Tyr Cys Leu
1 5 10 15

Ser Thr

<210> 1421
<211> 15
<212> PRT
<213> Hepatitis C virus

<400> 1421

Leu Ala Ala Leu Ala Ala Tyr Cys Leu Ser Thr Gly Cys Val Val
1 5 10 15

<210> 1422
<211> 14
<212> PRT
<213> Hepatitis C virus

<400> 1422

Ala Ala Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly
1 5 10

<210> 1423
<211> 15
<212> PRT
<213> Hepatitis C virus

<400> 1423

Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg Ile Val Leu
1 5 10 15

<210> 1424
<211> 14
<212> PRT
<213> Hepatitis C virus

<400> 1424

Gly Cys Val Val Ile Val Gly Arg Ile Val Leu Ser Gly Lys
1 5 10

<210> 1425
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1425

Val Ile Val Gly Arg Ile Val Leu Ser Gly Lys Pro Ala Ile Ile Pro
1 5 10 15

Asp Arg

<210> 1426
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1426

Leu Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Gln
1 5 10 15

Glu Phe

<210> 1427
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1427

Ile	Pro	Asp	Arg	Glu	Val	Leu	Tyr	Gln	Glu	Phe	Asp	Glu	Met	Glu	Glu
1				5				10						15	

Cys Ser

<210> 1428

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1428

Tyr	Gln	Glu	Phe	Asp	Glu	Met	Glu	Glu	Cys	Ser	Gln	His	Leu	Pro	Tyr
1					5				10					15	

Ile Glu

<210> 1429

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1429

Glu	Glu	Cys	Ser	Gln	His	Leu	Pro	Tyr	Ile	Glu	Gln	Gly	Met	Met	Leu
1					5				10					15	

Ala Glu

<210> 1430

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1430

Pro	Tyr	Ile	Glu	Gln	Gly	Met	Met	Leu	Ala	Glu	Gln	Phe	Lys	Gln	Lys
1					5				10					15	

Ala Leu

<210> 1431

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1431

Met Leu Ala Glu Gln Phe Lys Gln Lys Ala Leu Gly Leu Leu Gln Thr
 1 5 10 15

Ala Ser

<210> 1432
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1432

Gln Lys Ala Leu Gly Leu Leu Gln Thr Ala Ser Arg Gln Ala Glu Val
 1 5 10 15

Ile Thr

<210> 1433
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1433

Gln Thr Ala Ser Arg Gln Ala Glu Val Ile Thr Pro Ala Val Gln Thr
 1 5 10 15

Asn Trp

<210> 1434
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1434

Glu Val Ile Thr Pro Ala Val Gln Thr Asn Trp Gln Lys Leu Glu Val
 1 5 10 15

Phe Trp

<210> 1435
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1435

Gln Thr Asn Trp Gln Lys Leu Glu Val Phe Trp Ala Lys His Met Trp
 1 5 10 15

Asn Phe

<210> 1436
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1436

Glu Val Phe Trp Ala Lys His Met Trp Asn Phe Ile Ser Gly Ile Gln
 1 5 10 15

Tyr Leu

<210> 1437
 <211> 18
 <212> PRT
 <213> Hepatitis C virus
<400> 1437

Met Trp Asn Phe Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr
 1 5 10 15

Leu Pro

<210> 1438
 <211> 18
 <212> PRT
 <213> Hepatitis C virus
<400> 1438

Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn Pro Ala Ile
 1 5 10 15

Ala Ser

<210> 1439
 <211> 18
 <212> PRT
 <213> Hepatitis C virus
<400> 1439

Ser Thr Leu Pro Gly Asn Pro Ala Ile Ala Ser Leu Met Ala Phe Thr

1

5

10

15

Ala Ala

<210> 1440
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1440

Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro Leu
1 5 10 15

Thr Thr

<210> 1441
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1441

Phe Thr Ala Ala Val Thr Ser Pro Leu Thr Thr Gly Gln Thr Leu Leu
1 5 10 15

Phe Asn

<210> 1442
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1442

Pro Leu Thr Thr Gly Gln Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp
1 5 10 15

Val Ala

<210> 1443
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1443

Leu Leu Phe Asn Ile Leu Gly Gly Trp Val Ala Ala Gln Leu Ala Ala
1 5 10 15

Pro Gly

<210> 1444
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1444

Gly Trp Val Ala Ala Gln Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe
1 5 10 15

Val Gly

<210> 1445
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1445

Ala Ala Pro Gly Ala Ala Thr Ala Phe Val Gly Ala Gly Leu Ala Gly
1 5 10 15

Ala Ala

<210> 1446
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1446

Ala Phe Val Gly Ala Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly
1 5 10 15

Leu Gly

<210> 1447
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1447

Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly Lys Val Leu Val Asp
1 5 10 15

Ile Leu

<210> 1448
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1448

Val Gly Leu Gly Lys Val Leu Val Asp Ile Leu Ala Gly Tyr Gly Ala
1 5 10 15

Gly Val

<210> 1449
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1449

Val Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val
1 5 10 15

Ala Phe

<210> 1450
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1450

Gly Ala Gly Val Ala Gly Ala Leu Val Ala Phe Lys Ile Met Ser Gly
1 5 10 15

Glu Val

<210> 1451
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1451

Leu Val Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser Thr Glu Asp
1 5 10 15

Leu Val

<210> 1452
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1452

Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val Asn Leu Leu Pro Ala
1 5 10 15

Ile Leu

<210> 1453
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1453

Glu Asp Leu Val Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu
1 5 10 15

Val Val

<210> 1454
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1454

Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val Val Cys Ala
1 5 10 15

Ala Ile

<210> 1455
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1455

Ala Leu Val Val Gly Val Val Cys Ala Ala Ile Leu Arg Arg His Val
1 5 10 15

Gly Pro

<210> 1456
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1456

Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala Val
1 5 10 15

Gln Trp

<210> 1457
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1457

His Val Gly Pro Gly Glu Gly Ala Val Gln Trp Met Asn Arg Leu Ile
1 5 10 15

Ala Phe

<210> 1458
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1458

Ala Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn
1 5 10 15

His Val

<210> 1459
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1459

Leu Ile Ala Phe Ala Ser Arg Gly Asn His Val Ser Pro Thr His Tyr
1 5 10 15

Val Pro

<210> 1460
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1460

Gly Asn His Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala
1 5 10 15

Ala Arg

<210> 1461
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1461

His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val Thr Ala Ile Leu
1 5 10 15

Ser Ser

<210> 1462
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1462

Ala Ala Ala Arg Val Thr Ala Ile Leu Ser Ser Leu Thr Val Thr Gln
1 5 10 15

Leu Leu

<210> 1463
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1463

Ile Leu Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu His Gln
1 5 10 15

Trp Ile

<210> 1464
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1464

Thr Gln Leu Leu Arg Arg Leu His Gln Trp Ile Ser Ser Glu Cys Thr
1 5 10 15

Thr Pro

<210> 1465
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1465

His Gln Trp Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp
1 5 10 15

Leu Arg

<210> 1466
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1466

Cys Thr Thr Pro Cys Ser Gly Ser Trp Leu Arg Asp Ile Trp Asp Trp
1 5 10 15

Ile Cys

<210> 1467
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1467

Ser Trp Leu Arg Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp
1 5 10 15

Phe Lys

<210> 1468
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1468

Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys Thr Trp Leu Lys Ala
1 5 10 15
Lys Leu

<210> 1469
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1469

Ser Asp Phe Lys Thr Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro
1 5 10 15
Gly Ile

<210> 1470
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1470

Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe Val Ser Cys
1 5 10 15
Gln Arg

<210> 1471
<211> 18
<212> PRT
<213> Hepatitis C virus
<400> 1471

Leu Pro Gly Ile Pro Phe Val Ser Cys Gln Arg Gly Tyr Arg Gly Val
1 5 10 15
Trp Arg

<210> 1472

<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1472

Ser Cys Gln Arg Gly Tyr Arg Gly Val Trp Arg Gly Asp Gly Ile Met
1 5 10 15

His Thr

<210> 1473
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1473

Gly Val Trp Arg Gly Asp Gly Ile Met His Thr Arg Cys His Cys Gly
1 5 10 15

Ala Glu

<210> 1474
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1474

Ile Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His Val
1 5 10 15

Lys Asn

<210> 1475
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1475

Cys Gly Ala Glu Ile Thr Gly His Val Lys Asn Gly Thr Met Arg Ile
1 5 10 15

Val Gly

<210> 1476
<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1476

His Val Lys Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg
1 5 10 15

Asn Met

<210> 1477

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1477

Arg Ile Val Gly Pro Arg Thr Cys Arg Asn Met Trp Ser Gly Thr Phe
1 5 10 15

Pro Ile

<210> 1478

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1478

Cys Arg Asn Met Trp Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr
1 5 10 15

Gly Pro

<210> 1479

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1479

Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro Leu Pro
1 5 10 15

Ala Pro

<210> 1480

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1480

Thr Thr Gly Pro Cys Thr Pro Leu Pro Ala Pro Asn Tyr Lys Phe Ala
1 5 10 15

Leu Trp

<210> 1481

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1481

Leu Pro Ala Pro Asn Tyr Lys Phe Ala Leu Trp Arg Val Ser Ala Glu
1 5 10 15

Glu Tyr

<210> 1482

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1482

Phe Ala Leu Trp Arg Val Ser Ala Glu Glu Tyr Val Glu Ile Arg Arg
1 5 10 15

Val Gly

<210> 1483

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1483

Ala Glu Glu Tyr Val Glu Ile Arg Arg Val Gly Asp Phe His Tyr Val
1 5 10 15

Ser Gly

<210> 1484

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1484

Arg Arg Val Gly Asp Phe His Tyr Val Ser Gly Met Thr Thr Asp Asn
1 5 10 15

Leu Lys

<210> 1485

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1485

Tyr Val Ser Gly Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Ile
1 5 10 15

Pro Ser

<210> 1486

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1486

Asp Asn Leu Lys Cys Pro Cys Gln Ile Pro Ser Pro Glu Phe Phe Thr
1 5 10 15

Glu Leu

<210> 1487

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1487

Gln Ile Pro Ser Pro Glu Phe Phe Thr Glu Leu Asp Gly Val Arg Leu
1 5 10 15

His Arg

<210> 1488

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1488

Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg Phe Ala Pro Pro Cys
1 5 10 15

Lys Pro

<210> 1489

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1489

Arg Leu His Arg Phe Ala Pro Pro Cys Lys Pro Leu Leu Arg Glu Glu
1 5 10 15

Val Ser

<210> 1490

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1490

Pro Cys Lys Pro Leu Leu Arg Glu Glu Val Ser Phe Arg Val Gly Leu
1 5 10 15

His Glu

<210> 1491

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1491

Glu Glu Val Ser Phe Arg Val Gly Leu His Glu Tyr Pro Val Gly Ser
1 5 10 15

Gln Leu

<210> 1492

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1492

Gly Leu His Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys Glu Pro Glu
 1 5 10 15

Pro Asp

<210> 1493
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1493

Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val Ala Val Leu Thr
 1 5 10 15

Ser Met

<210> 1494
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1494

Pro Glu Pro Asp Val Ala Val Leu Thr Ser Met Leu Thr Asp Pro Ser
 1 5 10 15

His Ile

<210> 1495
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1495

Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu Ala Ala
 1 5 10 15

Gly Arg

<210> 1496
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1496

Pro Ser His Ile Thr Ala Glu Ala Ala Gly Arg Arg Leu Ala Arg Gly
 1 5 10 15

Ser Pro

<210> 1497
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1497

Ala Ala Gly Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Met Ala Ser
 1 5 10 15

Ser Ser

<210> 1498
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1498

Arg Gly Ser Pro Pro Ser Met Ala Ser Ser Ser Ala Ser Gln Leu Ser
 1 5 10 15

Ala Pro

<210> 1499
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1499

Ala Ser Ser Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr
 1 5 10 15

Cys Thr

<210> 1500
 <211> 18
 <212> PRT
 <213> Hepatitis C virus

<400> 1500

Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr Ala Asn His Asp Ser

1

5

10

15

Pro Asp

<210> 1501
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1501

Ala Thr Cys Thr Ala Asn His Asp Ser Pro Asp Ala Glu Leu Ile Glu
1 5 10 15

Ala Asn

<210> 1502
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1502

Asp Ser Pro Asp Ala Glu Leu Ile Glu Ala Asn Leu Leu Trp Arg Gln
1 5 10 15

Glu Met

<210> 1503
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1503

Ile Glu Ala Asn Leu Leu Trp Arg Gln Glu Met Gly Gly Asn Ile Thr
1 5 10 15

Arg Val

<210> 1504
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1504

Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn Lys
1 5 10 15

Val Val

<210> 1505
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1505

Ile Thr Arg Val Glu Ser Glu Asn Lys Val Val Ile Leu Asp Ser Phe
1 5 10 15

Asp Pro

<210> 1506
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1506

Asn Lys Val Val Ile Leu Asp Ser Phe Asp Pro Leu Val Ala Glu Glu
1 5 10 15

Asp Glu

<210> 1507
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1507

Ser Phe Asp Pro Leu Val Ala Glu Glu Asp Glu Arg Glu Val Ser Val
1 5 10 15

Pro Ala

<210> 1508
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1508

Glu Glu Asp Glu Arg Glu Val Ser Val Pro Ala Glu Ile Leu Arg Lys
1 5 10 15

Ser Arg

<210> 1509
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1509

Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg Phe Ala Arg Ala
1 5 10 15

Leu Pro

<210> 1510
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1510

Arg Lys Ser Arg Arg Phe Ala Arg Ala Leu Pro Val Trp Ala Arg Pro
1 5 10 15

Asp Tyr

<210> 1511
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1511

Arg Ala Leu Pro Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro Leu Val
1 5 10 15

Glu Thr

<210> 1512
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1512

Arg Pro Asp Tyr Asn Pro Pro Leu Val Glu Thr Trp Lys Lys Pro Asp
1 5 10 15

Tyr Glu

<210> 1513
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1513

Leu Val Glu Thr Trp Lys Lys Pro Asp Tyr Glu Pro Pro Val Val His
1 5 10 15

Gly Cys

<210> 1514
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1514

Pro Asp Tyr Glu Pro Pro Val Val His Gly Cys Pro Leu Pro Pro Pro
1 5 10 15

Arg Ser

<210> 1515
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1515

Val His Gly Cys Pro Leu Pro Pro Pro Arg Ser Pro Pro Pro Val Pro Pro
1 5 10 15

Pro Arg

<210> 1516
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1516

Pro Pro Arg Ser Pro Pro Val Pro Pro Pro Arg Lys Lys Arg Thr Val
1 5 10 15

Val Leu

<210> 1517
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1517

Pro Pro Pro Arg Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu
1 5 10 15

Ser Thr

<210> 1518
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1518

Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala Leu Ala Glu Leu
1 5 10 15

Ala Thr

<210> 1519
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1519

Thr Leu Ser Thr Ala Leu Ala Glu Leu Ala Thr Lys Ser Phe Gly Ser
1 5 10 15

Ser Ser

<210> 1520
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1520

Glu Leu Ala Thr Lys Ser Phe Gly Ser Ser Ser Thr Ser Gly Ile Thr
1 5 10 15

Gly Asp

<210> 1521
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1521

Gly Ser Ser Ser Thr Ser Gly Ile Thr Gly Asp Asn Thr Thr Thr Ser
1 5 10 15

Ser Glu

<210> 1522
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1522

Ile Thr Gly Asp Asn Thr Thr Ser Ser Glu Pro Ala Pro Ser Gly
1 5 10 15

Cys Pro

<210> 1523
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1523

Thr Ser Ser Glu Pro Ala Pro Ser Gly Cys Pro Pro Asp Ser Asp Val
1 5 10 15

Glu Ser

<210> 1524
<211> 15
<212> PRT
<213> Hepatitis C virus

<400> 1524

Ser Gly Cys Pro Pro Asp Ser Asp Val Glu Ser Tyr Ser Ser Met
1 5 10 15

<210> 1525
<211> 14
<212> PRT

<213> Hepatitis C virus

<400> 1525

Pro Asp Ser Asp Val Glu Ser Tyr Ser Ser Met Pro Pro Leu
1 5 10

<210> 1526

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1526

Asp Val Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu Gly Glu Pro Gly
1 5 10 15

Asp Pro

<210> 1527

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1527

Met Pro Pro Leu Glu Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly
1 5 10 15

Ser Trp

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<400> 1528

Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val Ser Ser
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Gly Ala

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<400> 1529

Asp Gly Ser Trp Ser Thr Val Ser Ser Gly Ala Asp Thr Glu Asp

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Thr Val Ser Ser Gly Ala Asp Thr Glu Asp Val Val Cys
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Ser Ser Gly Ala Asp Thr Glu Asp Val Val Cys Cys Ser Met Ser
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Asp Thr Glu Asp Val Val Cys Cys Ser Met Ser Tyr Ser Trp
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Asp Val Val Cys Cys Ser Met Ser Tyr Ser Trp Thr Gly Ala Leu
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Cys Ser Met Ser Tyr Ser Trp Thr Gly Ala Leu Val Thr Pro
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Ser Tyr Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala Ala Glu Glu
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Gln Lys

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Leu Val Thr Pro Cys Ala Ala Glu Glu Gln Lys Leu Pro Ile Asn Ala
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Leu Ser

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Glu Glu Gln Lys Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg
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His His

<210> 1538

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<212> PRT

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<400> 1538

Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu Val Tyr Ser
1 5 10 15

Thr Thr

<210> 1539

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1539

Leu Arg His His Asn Leu Val Tyr Ser Thr Thr Ser Arg Ser Ala Cys
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Gln Arg

<210> 1540

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1540

Tyr Ser Thr Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys Val Thr
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Phe Asp

<210> 1541

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1541

Ala Cys Gln Arg Gln Lys Lys Val Thr Phe Asp Arg Leu Gln Val Leu
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Asp Ser

<210> 1542

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1542

Val Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp Val
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Leu Lys

<210> 1543

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1543

Val Leu Asp Ser His Tyr Gln Asp Val Leu Lys Glu Val Lys Ala Ala
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Ala Ser

<210> 1544

<211> 18

<212> PRT

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<400> 1544

Asp Val Leu Lys Glu Val Lys Ala Ala Ala Ser Lys Val Lys Ala Asn
1 5 10 15

Leu Leu

<210> 1545

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1545

Ala Ala Ala Ser Lys Val Lys Ala Asn Leu Leu Ser Val Glu Glu Ala
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Cys Ser

<210> 1546

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1546

Ala Asn Leu Leu Ser Val Glu Glu Ala Cys Ser Leu Thr Pro Pro His
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Ser Ala

<210> 1547

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1547

Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys Phe Gly
1 5 10 15

Tyr Gly

<210> 1548
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<212> PRT
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<400> 1548

Pro His Ser Ala Lys Ser Lys Phe Gly Tyr Gly Ala Lys Asp Val Arg
1 5 10 15

Cys His

<210> 1549
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<212> PRT
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<400> 1549

Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala Val
1 5 10 15

Ala His

<210> 1550
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<400> 1550

Val Arg Cys His Ala Arg Lys Ala Val Ala His Ile Asn Ser Val Trp
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Lys Asp

<210> 1551
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<212> PRT
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<400> 1551

Ala Val Ala His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Ser
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Val Thr

<210> 1552
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<400> 1552

Val Trp Lys Asp Leu Leu Glu Asp Ser Val Thr Pro Ile Asp Thr Thr
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Ile Met

<210> 1553
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<400> 1553

Asp Ser Val Thr Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val
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Phe Cys

<210> 1554
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<400> 1554

Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln Pro Glu Lys
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Gly Gly

<210> 1555
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<400> 1555

Glu Val Phe Cys Val Gln Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg

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Leu Ile

<210> 1556
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<400> 1556

Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu
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Gly Val

<210> 1557
<211> 18
<212> PRT
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<400> 1557

Ala Arg Leu Ile Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu Lys
1 5 10 15

Met Ala

<210> 1558
<211> 18
<212> PRT
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<400> 1558

Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val
1 5 10 15

Ser Lys

<210> 1559
<211> 18
<212> PRT
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<400> 1559

Glu Lys Met Ala Leu Tyr Asp Val Val Ser Lys Leu Pro Leu Ala Val
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Met Gly

<210> 1560
<211> 18
<212> PRT
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<400> 1560

Val Val Ser Lys Leu Pro Leu Ala Val Met Gly Ser Ser Tyr Gly Phe
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Gln Tyr

<210> 1561
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<212> PRT
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<400> 1561

Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser Pro Gly Gln Arg
1 5 10 15

Val Glu

<210> 1562
<211> 18
<212> PRT
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<400> 1562

Gly Phe Gln Tyr Ser Pro Gly Gln Arg Val Glu Phe Leu Val Gln Ala
1 5 10 15

Trp Lys

<210> 1563
<211> 18
<212> PRT
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<400> 1563

Gln Arg Val Glu Phe Leu Val Gln Ala Trp Lys Ser Lys Lys Thr Pro
1 5 10 15

Met Gly

<210> 1564
<211> 18
<212> PRT
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<400> 1564

Gln Ala Trp Lys Ser Lys Lys Thr Pro Met Gly Phe Ser Tyr Asp Thr
1 5 10 15

Arg Cys

<210> 1565
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1565

Thr Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val
1 5 10 15

Thr Glu

<210> 1566
<211> 18
<212> PRT
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<400> 1566

Asp Thr Arg Cys Phe Asp Ser Thr Val Thr Glu Ser Asp Ile Arg Thr
1 5 10 15

Glu Glu

<210> 1567
<211> 18
<212> PRT
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<400> 1567

Thr Val Thr Glu Ser Asp Ile Arg Thr Glu Glu Ala Ile Tyr Gln Cys
1 5 10 15

Cys Asp

<210> 1568
<211> 18
<212> PRT
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<400> 1568

Arg Thr Glu Glu Ala Ile Tyr Gln Cys Cys Asp Leu Asp Pro Gln Ala
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Arg Val

<210> 1569
<211> 18
<212> PRT
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<400> 1569

Gln Cys Cys Asp Leu Asp Pro Gln Ala Arg Val Ala Ile Lys Ser Leu
1 5 10 15

Thr Glu

<210> 1570
<211> 18
<212> PRT
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<400> 1570

Gln Ala Arg Val Ala Ile Lys Ser Leu Thr Glu Arg Leu Tyr Val Gly
1 5 10 15

Gly Pro

<210> 1571
<211> 18
<212> PRT
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<400> 1571

Ser Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Arg
1 5 10 15

Gly Glu

<210> 1572
<211> 18
<212> PRT
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<400> 1572

Val Gly Gly Pro Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr Arg
1 5 10 15

Arg Cys

<210> 1573
<211> 18
<212> PRT
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<400> 1573

Ser Arg Gly Glu Asn Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val
1 5 10 15

Leu Thr

<210> 1574
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1574

Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn
1 5 10 15

Thr Leu

<210> 1575
<211> 18
<212> PRT
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<400> 1575

Gly Val Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr Cys Tyr Ile Lys
1 5 10 15

Ala Arg

<210> 1576
<211> 18
<212> PRT
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<400> 1576

Gly Asn Thr Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala
1 5 10 15

Ala Gly

<210> 1577
<211> 18
<212> PRT
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<400> 1577

Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu Gln Asp Cys Thr
1 5 10 15

Met Leu

<210> 1578
<211> 18
<212> PRT
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<400> 1578

Arg Ala Ala Gly Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp
1 5 10 15

Leu Val

<210> 1579
<211> 18
<212> PRT
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<400> 1579

Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys Glu Ser
1 5 10 15

Ala Gly

<210> 1580
<211> 18
<212> PRT
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<400> 1580

Asp Asp Leu Val Val Ile Cys Glu Ser Ala Gly Val Gln Glu Asp Ala
1 5 10 15

Ala Ser

<210> 1581
<211> 18
<212> PRT
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<400> 1581

Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr
1 5 10 15

Glu Ala

<210> 1582
<211> 18
<212> PRT
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<400> 1582

Asp Ala Ala Ser Leu Arg Ala Phe Thr Glu Ala Met Thr Arg Tyr Ser
1 5 10 15

Ala Pro

<210> 1583
<211> 18
<212> PRT
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<400> 1583

Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro
1 5 10 15

Gln Pro

<210> 1584
<211> 18
<212> PRT
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<400> 1584

Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro Glu Tyr Asp Leu Glu
1 5 10 15

Leu Ile

<210> 1585
<211> 18
<212> PRT
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<400> 1585

Pro Pro Gln Pro Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser
1 5 10 15

Asn Val

<210> 1586
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1586

Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val Ala His Asp
1 5 10 15

Gly Ala

<210> 1587
<211> 18
<212> PRT
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<400> 1587

Ser Ser Asn Val Ser Val Ala His Asp Gly Ala Gly Lys Arg Val Tyr
1 5 10 15

Tyr Leu

<210> 1588

<211> 18
<212> PRT
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<400> 1588

His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro Thr
1 5 10 15
. .
Thr Pro

<210> 1589
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1589

Val Tyr Tyr Leu Thr Arg Asp Pro Thr Thr Pro Leu Ala Arg Ala Ala
1 5 10 15

Trp Glu

<210> 1590
<211> 18
<212> PRT
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<400> 1590

Pro Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr
1 5 10 15

Pro Val

<210> 1591
<211> 18
<212> PRT
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<400> 1591

Ala Ala Trp Glu Thr Ala Arg His Thr Pro Val Asn Ser Trp Leu Gly
1 5 10 15

Asn Ile

<210> 1592
<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1592

His Thr Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro
1 5 10 15

Thr Leu

<210> 1593

<211> 18

<212> PRT

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<400> 1593

Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu Trp Ala Arg Met Ile
1 5 10 15

Leu Met

<210> 1594

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1594

Ala Pro Thr Leu Trp Ala Arg Met Ile Leu Met Thr His Phe Phe Ser
1 5 10 15

Val Leu

<210> 1595

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1595

Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile Ala Arg Asp Gln
1 5 10 15

Leu Glu

<210> 1596

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1596

Phe Ser Val Leu Ile Ala Arg Asp Gln Leu Glu Gln Ala Leu Asn Cys
1 5 10 15

Glu Ile

<210> 1597

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1597

Asp Gln Leu Glu Gln Ala Leu Asn Cys Glu Ile Tyr Gly Ala Cys Tyr
1 5 10 15

Ser Ile

<210> 1598

<211> 15

<212> PRT

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<400> 1598

Asn Cys Glu Ile Tyr Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp
1 5 10 15

<210> 1599

<211> 14

<212> PRT

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<400> 1599

Tyr Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro Pro
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<210> 1600

<211> 18

<212> PRT

<213> Hepatitis C virus

<400> 1600

Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu
1 5 10 15

His Gly

<210> 1601
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<212> PRT
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<400> 1601

Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly Leu Ser Ala Phe Ser
1 5 10 15

Leu His

<210> 1602
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<212> PRT
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<400> 1602

Arg Leu His Gly Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly
1 5 10 15

Glu Ile

<210> 1603
<211> 18
<212> PRT
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<400> 1603

Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg Val Ala Ala
1 5 10 15

Cys Leu

<210> 1604
<211> 18
<212> PRT
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<400> 1604

Pro Gly Glu Ile Asn Arg Val Ala Ala Cys Leu Arg Lys Leu Gly Val
1 5 10 15

Pro Pro

<210> 1605
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1605

Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Ala Trp Arg
1 5 10 15

His Arg

<210> 1606
<211> 18
<212> PRT
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<400> 1606

Gly Val Pro Pro Leu Arg Ala Trp Arg His Arg Ala Arg Ser Val Arg
1 5 10 15

Ala Arg

<210> 1607
<211> 18
<212> PRT
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<400> 1607

Trp Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ser Arg Gly
1 5 10 15

Gly Arg

<210> 1608
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1608

Val Arg Ala Arg Leu Leu Ser Arg Gly Gly Arg Ala Ala Ile Cys Gly
1 5 10 15

Lys Tyr

<210> 1609
<211> 18
<212> PRT
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<400> 1609

Arg Gly Gly Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp Ala
1 5 10 15

Val Arg

<210> 1610
<211> 18
<212> PRT
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<400> 1610

Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr Lys Leu Lys Leu
1 5 10 15

Thr Pro

<210> 1611
<211> 18
<212> PRT
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<400> 1611

Trp Ala Val Arg Thr Lys Leu Lys Leu Thr Pro Ile Ala Ala Ala Gly
1 5 10 15

Arg Leu

<210> 1612
<211> 18
<212> PRT
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<400> 1612

Lys Leu Thr Pro Ile Ala Ala Ala Gly Arg Leu Asp Leu Ser Gly Trp
1 5 10 15

Phe Thr

<210> 1613
<211> 18
<212> PRT
<213> Hepatitis C virus

<400> 1613

Ala Gly Arg Leu Asp Leu Ser Gly Trp Phe Thr Ala Gly Tyr Ser Gly
1 5 10 15

Gly Asp

<210> 1614
<211> 18
<212> PRT
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<400> 1614

Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His Ser Val
1 5 10 15

Ser His

<210> 1615
<211> 18
<212> PRT
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<400> 1615

Ser Gly Gly Asp Ile Tyr His Ser Val Ser His Ala Arg Pro Arg Trp
1 5 10 15

Phe Trp

<210> 1616
<211> 18
<212> PRT
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<400> 1616

Ser Val Ser His Ala Arg Pro Arg Trp Phe Trp Phe Cys Leu Leu Leu
1 5 10 15

Leu Ala

<210> 1617

<211> 15
<212> PRT
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<400> 1617

Arg Trp Phe Trp Phe Cys Leu Leu Leu Ala Ala Gly Val Gly
1 5 10 15

<210> 1618
<211> 14
<212> PRT
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<400> 1618

Phe Cys Leu Leu Leu Leu Ala Ala Gly Val Gly Ile Tyr Leu
1 5 10

<210> 1619
<211> 15
<212> PRT
<213> Hepatitis C virus

<400> 1619

Leu Leu Leu Ala Ala Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg
1 5 10 15

<210> 1620
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<212> PRT
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<400> 1620

Met Gly Gly Trp Ser Ser Lys Pro Arg Lys Gly Met Gly Thr Asn
1 5 10 15

<210> 1621
<211> 15
<212> PRT
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<400> 1621

Ser Ser Lys Pro Arg Lys Gly Met Gly Thr Asn Leu Ser Val Pro
1 5 10 15

<210> 1622
<211> 15
<212> PRT
<213> Hepatitis B virus

<400> 1622

Arg Lys Gly Met Gly Thr Asn Leu Ser Val Pro Asn Pro Leu Gly
 1 5 10 15

<210> 1623
 <211> 15
 <212> PRT
 <213> Hepatitis B virus

<400> 1623

Gly Thr Asn Leu Ser Val Pro Asn Pro Leu Gly Phe Phe Pro Asp
 1 5 10 15

<210> 1624
 <211> 15
 <212> PRT
 <213> Hepatitis B virus

<400> 1624

Ser Val Pro Asn Pro Leu Gly Phe Phe Pro Asp His Gln Leu Asp
 1 5 10 15

<210> 1625
 <211> 15
 <212> PRT
 <213> Hepatitis B virus

<400> 1625

Pro Leu Gly Phe Phe Pro Asp His Gln Leu Asp Pro Ala Phe Gly
 1 5 10 15

<210> 1626
 <211> 15
 <212> PRT
 <213> Hepatitis B virus

<400> 1626

Phe Pro Asp His Gln Leu Asp Pro Ala Phe Gly Ala Asn Ser Asn
 1 5 10 15

<210> 1627
 <211> 15
 <212> PRT
 <213> Hepatitis B virus

<400> 1627

Gln Leu Asp Pro Ala Phe Gly Ala Asn Ser Asn Asn Pro Asp Trp
 1 5 10 15

<210> 1628
 <211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1628

Ala Phe Gly Ala Asn Ser Asn Asn Pro Asp Trp Asp Phe Asn Pro
1 5 10 15

<210> 1629

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1629

Asn Ser Asn Asn Pro Asp Trp Asp Phe Asn Pro Ile Lys Asp His
1 5 10 15

<210> 1630

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1630

Pro Asp Trp Asp Phe Asn Pro Ile Lys Asp His Trp Pro Ala Ala
1 5 10 15

<210> 1631

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1631

Phe Asn Pro Ile Lys Asp His Trp Pro Ala Ala Asn Gln Val Gly
1 5 10 15

<210> 1632

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1632

Lys Asp His Trp Pro Ala Ala Asn Gln Val Gly Val Gly Ala Phe
1 5 10 15

<210> 1633

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1633

Pro Ala Ala Asn Gln Val Gly Val Gly Ala Phe Gly Pro Gly Leu

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<210> 1634
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<212> PRT
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<400> 1634

Gln Val Gly Val Gly Ala Phe Gly Pro Gly Leu Thr Pro Pro His
1 5 10 15

<210> 1635
<211> 15
<212> PRT
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<400> 1635

Gly Ala Phe Gly Pro Gly Leu Thr Pro Pro His Gly Gly Ile Leu
1 5 10 15

<210> 1636
<211> 15
<212> PRT
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<400> 1636

Pro Gly Leu Thr Pro Pro His Gly Gly Ile Leu Gly Trp Ser Pro
1 5 10 15

<210> 1637
<211> 15
<212> PRT
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<400> 1637

Pro Pro His Gly Gly Ile Leu Gly Trp Ser Pro Gln Ala Gln Gly
1 5 10 15

<210> 1638
<211> 15
<212> PRT
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<400> 1638

Gly Ile Leu Gly Trp Ser Pro Gln Ala Gln Gly Ile Leu Thr Thr
1 5 10 15

<210> 1639
<211> 15
<212> PRT

<213> Hepatitis B virus

<400> 1639

Trp Ser Pro Gln Ala Gln Gly Ile Leu Thr Thr Val Ser Thr Ile
1 5 10 15

<210> 1640

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1640

Ala Gln Gly Ile Leu Thr Thr Val Ser Thr Ile Pro Pro Pro Ala
1 5 10 15

<210> 1641

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1641

Leu Thr Thr Val Ser Thr Ile Pro Pro Pro Ala Ser Thr Asn Arg
1 5 10 15

<210> 1642

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1642

Ser Thr Ile Pro Pro Pro Ala Ser Thr Asn Arg Gln Ser Gly Arg
1 5 10 15

<210> 1643

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1643

Pro Pro Ala Ser Thr Asn Arg Gln Ser Gly Arg Gln Pro Thr Pro
1 5 10 15

<210> 1644

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1644

Thr Asn Arg Gln Ser Gly Arg Gln Pro Thr Pro Ile Ser Pro Pro
1 5 10 15

<210> 1645
<211> 15
<212> PRT
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<400> 1645

Ser Gly Arg Gln Pro Thr Pro Ile Ser Pro Pro Leu Arg Asp Ser
1 5 10 15

<210> 1646
<211> 15
<212> PRT
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<400> 1646

Pro Thr Pro Ile Ser Pro Pro Leu Arg Asp Ser His Pro Gln Ala
1 5 10 15

<210> 1647
<211> 15
<212> PRT
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<400> 1647

Ser Pro Pro Leu Arg Asp Ser His Pro Gln Ala Met Gln Trp Asn
1 5 10 15

<210> 1648
<211> 15
<212> PRT
<213> Hepatitis B virus

<400> 1648

Arg Asp Ser His Pro Gln Ala Met Gln Trp Asn Ser Thr Ala Phe
1 5 10 15

<210> 1649
<211> 15
<212> PRT
<213> Hepatitis B virus

<400> 1649

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Ala Lys Tyr Leu Trp Glu Trp Ala Ser Val Arg Phe Ser Trp Leu
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His Leu Ser Thr Ser Lys Arg Gln Ser Ser Ser Gly His Ala Val
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Phe Arg Asn Ser Lys Pro Cys Ser Glu Tyr Cys Leu Ser His Leu
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Lys Pro Cys Ser Glu Tyr Cys Leu Ser His Leu Val Asn Leu Arg
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Asp Trp Gly Pro Cys Asp Glu His Gly Glu His His Ile Arg Ile
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Leu Val Val Asp Phe Ser Gln Phe Ser Arg Gly Ile Thr Arg Val
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Ser Arg Gly Ile Thr Arg Val Ser Trp Pro Lys Phe Ala Val Pro
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Leu Asp Val Ser Ala Ala Phe Tyr His Ile Pro Leu His Pro Ala
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His Ile Pro Leu His Pro Ala Ala Met Pro His Leu Leu Ile Gly
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Asp Ser Cys Ser Arg Gln Leu Tyr Val Ser Leu Met Leu Leu Tyr
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Gly Asp Pro Val Pro Asn Met Glu Asn Ile Ala Ser Gly Leu Leu
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Val Ser Gly Pro Phe Gly Pro Leu Pro Ser Pro Ser Ser Ala
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Ser Pro Ser Ala Val Pro Thr Asp His Gly Ala His Leu Ser Leu
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Thr Thr Val Asn Ala His Arg Asn Leu Pro Lys Val Leu His Lys
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Gly Glu Glu Ile Arg Leu Lys Val Phe Val Leu Gly Gly Cys Arg
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Ile Lys Pro Tyr Tyr Pro Glu His Leu Val Asn His Tyr Phe Gln
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Arg Leu Val Phe Gln Thr Ser Thr Arg His Gly Asp Glu Ser Phe
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Gln Thr Ser Thr Arg His Gly Asp Glu Ser Phe Cys Ser Gln Ser
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Arg His Gly Asp Glu Ser Phe Cys Ser Gln Ser Ser Gly Ile Leu
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Ser Ser Gly Ile Leu Ser Arg Pro Pro Val Gly Ser Ser Leu Gln
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Leu Ser Arg Pro Pro Val Gly Ser Ser Leu Gln Ser Lys His Arg
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Pro Val Gly Ser Ser Leu Gln Ser Lys His Arg Lys Ser Arg Leu
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Ser Leu Gln Ser Lys His Arg Lys Ser Arg Leu Gly Leu Gln Ser
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Gln Gly Arg Ser Trp Ser Ile Arg Ala Gly Phe His Pro Thr Ala
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Trp Ser Ile Arg Ala Gly Phe His Pro Thr Ala Arg Arg Pro Phe
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Ala Gly Phe His Pro Thr Ala Arg Arg Pro Phe Gly Val Glu Pro
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Pro Thr Ala Arg Arg Pro Phe Gly Val Glu Pro Ser Gly Ser Gly
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Arg Pro Phe Gly Val Glu Pro Ser Gly Ser Gly His Thr Thr Asn
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Val Glu Pro Ser Gly Ser Gly His Thr Thr Asn Phe Ala Ser Lys
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Gly Ser Gly His Thr Thr Asn Phe Ala Ser Lys Ser Ala Ser Cys
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Thr Thr Asn Phe Ala Ser Lys Ser Ala Ser Cys Leu Tyr Gln Ser
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Ala Ser Lys Ser Ala Ser Cys Leu Tyr Gln Ser Pro Val Arg Lys
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Cys Ile Gln Ser Gln Leu Arg Lys Ser Arg Leu Gly Pro Gln Pro
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Thr Gln Gly Gln Leu Ala Gly Arg Pro Gln Gly Gly Ser Gly Ser
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Val Glu Pro Ser Gly Ser Gly His Thr His Asn Cys Ala Ser Ser
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Gly Ser Gly His Thr His Asn Cys Ala Ser Ser Ser Ser Cys
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Thr His Asn Cys Ala Ser Ser Ser Ser Cys Leu His Gln Ser
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Gln Gly Ser Leu Ala Arg Gly Lys Ser Gly Arg Ser Gly Ser Ile
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Ala Arg Gly Lys Ser Gly Arg Ser Gly Ser Ile Arg Ala Arg Val
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Ser Gly Arg Ser Gly Ser Ile Arg Ala Arg Val His Pro Thr Thr
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Gly Ser Ile Arg Ala Arg Val His Pro Thr Thr Arg Arg Ser Phe
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Val Glu Pro Ser Gly Ser Gly His Ile Asp Asn Ser Ala Ser Ser
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Gly Ser Gly His Ile Asp Asn Ser Ala Ser Ser Ala Ser Ser Cys
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Lys Ala Ala Tyr Pro Ser Val Ser Thr Phe Glu Lys His Ser Ser
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Pro Ser Val Ser Thr Phe Glu Lys His Ser Ser Ser Gly His Ala
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His Ala Val Glu Leu His Asn Leu Pro Pro Asn Ser Ala Arg Ser
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Cys Tyr Gly Ser Leu Pro Gln Asp His Ile Ile Gln Lys Ile Lys
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Gly Arg Leu Gly Leu Tyr Arg Pro Leu Leu Arg Leu Pro Tyr Arg
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Phe Leu Pro Ser Asp Phe Phe Pro Ser Val
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Val Leu Gln Ala Gly Phe Phe Leu Leu
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Phe Leu Leu Thr Arg Ile Leu Thr Ile
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Gly Leu Ser Pro Thr Val Trp Leu Ser Val
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Tyr Leu His Thr Leu Trp Lys Ala Gly Ile
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<213> Hepatitis B virus

<400> 2173

Asn Leu Ser Trp Leu Ser Leu Asp Val
1 5

<210> 2174
<211> 9
<212> PRT
<213> Hepatitis B virus

<400> 2174

Gly Leu Ser Arg Tyr Val Ala Arg Leu
1 5

<210> 2175
<211> 9
<212> PRT
<213> Hepatitis B virus

<400> 2175

Lys Leu His Leu Tyr Ser His Pro Ile
1 5

<210> 2176
<211> 9
<212> PRT
<213> Hepatitis B virus

<400> 2176

Leu Leu Ala Gln Phe Thr Ser Ala Ile
1 5

<210> 2177
<211> 9

<212> PRT
<213> Hepatitis B virus

<400> 2177

Tyr Met Asp Asp Val Val Leu Gly Ala
1 5

<210> 2178
<211> 9
<212> PRT
<213> Hepatitis B virus

<400> 2178

Tyr Val Asp Asp Val Val Leu Gly Ala
1 5

<210> 2179
<211> 9
<212> PRT
<213> Hepatitis B virus

<400> 2179

Tyr Ile Asp Asp Val Val Leu Gly Ala
1 5

<210> 2180
<211> 9
<212> PRT
<213> Hepatitis B virus

<400> 2180

Phe Leu Leu Ser Leu Gly Ile His Leu
1 5

<210> 2181
<211> 9
<212> PRT
<213> Hepatitis B virus

<400> 2181

Ala Leu Met Pro Leu Tyr Ala Cys Ile
1 5

<210> 2182
<211> 9
<212> PRT
<213> Hepatitis B virus

<400> 2182

Trp Ile Leu Arg Gly Thr Ser Phe Val

1

5

<210> 2183
<211> 10
<212> PRT
<213> Hepatitis B virus

<400> 2183

Ile Leu Arg Gly Thr Ser Phe Val Tyr Val
1 5 10

<210> 2184
<211> 543
<212> PRT
<213> Simian immunodeficiency virus

<400> 2184

Met Gly Val Arg Asn Ser Val Leu Ser Gly Lys Lys Ala Asp Glu Leu
1 5 10 15

Glu Lys Ile Arg Leu Arg Pro Asn Gly Lys Lys Lys Tyr Met Leu Lys
20 25 30

His Val Val Trp Ala Ala Asn Glu Leu Asp Arg Phe Gly Leu Ala Glu
35 40 45

Ser Leu Leu Glu Asn Lys Glu Gly Cys Gln Lys Ile Leu Ser Val Leu
50 55 60

Ala Pro Leu Val Pro Thr Gly Ser Glu Asn Leu Lys Ser Leu Tyr Asn
65 70 75 80

Thr Val Cys Val Ile Trp Cys Ile His Ala Glu Glu Lys Val Lys His
85 90 95

Thr Glu Glu Ala Lys Gln Ile Val Gln Arg His Leu Val Val Glu Thr
100 105 110

Gly Thr Thr Glu Thr Met Pro Lys Thr Ser Arg Pro Thr Ala Pro Ser
115 120 125

Ser Gly Arg Gly Gly Asn Tyr Pro Val Gln Gln Ile Gly Gly Asn Tyr
130 135 140

Val His Leu Pro Leu Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Leu
145 150 155 160

Ile Glu Glu Lys Lys Phe Gly Ala Glu Val Val Ile Glu Glu Lys Lys
165 170 175

Thr Pro Tyr Asp Ile Asn Gln Met Leu Asn Cys Val Gly Asp His Gln
195 200 205

Ala Ala Met Gln Ile Ile Arg Asp Ile Ile Asn Glu Glu Ala Ala Asp
210 215 220

Trp Asp Leu Gln His Pro Gln Pro Ala Pro Gln Gln Gly Gln Leu Arg
225 230 235 240

Glu Pro Ser Gly Ser Asp Ile Ala Gly Thr Thr Ser Ser Val Asp Glu
245 250 255

Gln Ile Gln Trp Met Tyr Arg Gln Gln Asn Pro Ile Pro Val Gly Asn
260 265 270

Ile Tyr Arg Arg Trp Ile Gln Leu Gly Leu Gln Lys Cys Val Arg Met
275 280 285

Tyr Asn Pro Thr Asn Ile Leu Asp Val Lys Gln Gly Pro Lys Glu Pro
 290 295 300

Phe Gln Ser Tyr Val Asp Arg Phe Tyr Lys Ser Leu Arg Ala Glu Gln
 305 310 315 320

Thr Asp Ala Ala Val Lys Asn Trp Met Thr Gln Thr Leu Leu Ile Gln

Asn Ala Asn Pro Asp Cys Thr Leu Leu Ile Gln Asn Ala Asn Pro Asp

Cys Lys Leu Val Leu Lys Gly Leu Gly Val Asn Pro Thr Leu Glu Glu

Met Leu Thr Ala Cys Gln Gly Val Glu Glu Pro Ser

Leu Met Ala Glu Ala Leu Lys Glu Ala Leu Ala Pro Val Pro Ile Pro
385 390 395

Phe Ala Ala Ala Gln Gln Arg Gly Pro Arg Lys Pro Ile Lys Cys Tyr

405

410

415

Asn Cys Gly Lys Glu Gly His Ser Ala Arg Gln Cys Arg Ala Pro Arg
 420 425 430

Arg Gln Gly Cys Trp Lys Cys Gly Lys Met Asp His Val Met Ala Lys
 435 440 445

Cys Pro Asp Arg Gln Ala Gly Phe Leu Gly Leu Gly Pro Trp Gly Lys
 450 455 460

Lys Pro Arg Asn Phe Pro Met Ala Gln Val His Gln Gly Leu Met Pro
 465 470 475 480

Thr Ala Pro Pro Glu Asp Pro Ala Val Asp Leu Leu Lys Asn Tyr Met
 485 490 495

Gln Leu Gly Lys Gln Gln Arg Glu Lys Gln Arg Glu Ser Arg Glu Lys
 500 505 510

Pro Arg Glu Lys Gln Arg Glu Ser Arg Glu Lys Pro Tyr Lys Glu Val
 515 520 525

Thr Glu Asp Leu Leu His Leu Asn Ser Leu Phe Gly Gly Asp Gln
 530 535 540

<210> 2185
<211> 1118
<212> PRT
<213> Simian immunodeficiency virus

<400> 2185

Val Leu Glu Leu Trp Glu Arg Gly Thr Leu Cys Lys Ala Met Gln Ser
 1 5 10 15

Pro Lys Lys Thr Gly Met Leu Glu Met Trp Lys Asn Gly Pro Cys Tyr
 20 25 30

Gly Gln Met Pro Arg Gln Thr Gly Gly Phe Phe Arg Pro Trp Ser Met
 35 40 45

Gly Lys Glu Ala Pro Gln Phe Pro His Gly Ser Ser Ala Ser Gly Ala
 50 55 60

Asp Ala Asn Cys Ser Pro Arg Gly Pro Ser Cys Gly Ser Ala Lys Glu
 65 70 75 80

Leu His Ala Val Gly Gln Ala Ala Glu Arg Lys Ala Glu Arg Lys Gln
 85 90 95

Arg Glu Ala Leu Gln Gly Gly Asp Arg Gly Phe Ala Ala Pro Gln Phe
 100 105 110

Ser Leu Trp Arg Arg Pro Val Val Thr Ala His Ile Glu Gly Gln Pro
 115 120 125

Val Glu Val Leu Leu Asp Thr Gly Ala Asp Asp Ser Ile Val Thr Gly
 130 135 140

Ile Glu Leu Gly Pro His Tyr Thr Pro Lys Ile Val Gly Gly Ile Gly
 145 150 155 160

Gly Phe Ile Asn Thr Lys Glu Gly Phe Ile Asn Thr Lys Glu Tyr Lys
 165 170 175

Asn Val Glu Ile Glu Val Leu Gly Lys Arg Ile Lys Gly Thr Ile Met
 180 185 190

Thr Gly Asp Thr Pro Ile Asn Ile Phe Gly Arg Asn Leu Leu Thr Ala
 195 200 205

Leu Gly Met Ser Leu Asn Phe Pro Ile Ala Lys Val Glu Pro Val Lys
 210 215 220

Val Ala Leu Lys Pro Gly Lys Asp Gly Pro Lys Leu Lys Gln Trp Pro
 225 230 235 240

Leu Ser Lys Glu Lys Ile Val Ala Leu Arg Glu Ile Cys Glu Lys Met
 245 250 255

Glu Lys Asp Gly Gln Leu Glu Glu Ala Pro Pro Thr Asn Pro Tyr Asn
 260 265 270

Thr Pro Thr Phe Ala Ile Lys Lys Lys Asp Lys Asn Lys Trp Arg Met
 275 280 285

Leu Ile Asp Phe Arg Glu Leu Asn Arg Val Thr Gln Asp Phe Thr Glu
 290 295 300

Val Gln Leu Gly Ile Pro His Pro Ala Gly Leu Ala Lys Arg Lys Arg
 305 310 315 320

Ile Thr Val Leu Asp Ile Gly Asp Ala Tyr Phe Ser Ile Pro Leu Asp
325 330 335

Glu Glu Asp Ala Tyr Phe Ser Ile Pro Leu Asp Glu Glu Phe Arg Gln
340 345 350

Tyr Thr Ala Phe Thr Leu Pro Ser Val Asn Asn Ala Glu Pro Gly Lys
355 360 365

Arg Tyr Ile Tyr Lys Val Leu Pro Gln Gly Trp Lys Gly Ser Pro Ala
 370 375 380

Ile Phe Gln Tyr Thr Met Arg His Val Leu Glu Pro Phe Arg Lys Ala
385 390 395 400

Asn Pro Asp Val Thr Leu Val Gln Tyr Met Asp Asp Ile Leu Ile Ala
405 410 415

Ser Asp Arg Thr Asp Leu Glu His Asp Arg Val Val Leu Gln Ser Lys
420 425 430

Glu Leu Leu Asn Ser Ile Gly Phe Ser Thr Pro Glu Glu Lys Phe Gln
435 440 445

Lys Asp Pro Pro Phe Gln Trp Met Gly Tyr Glu Leu Trp Pro Thr Lys
450 455 460

Trp Lys Leu Gln Lys Ile Glu Leu Pro Gln Arg Glu Thr Trp Thr Val
465 470 475 480

Asn Asp Ile Gln Lys Leu Val Gly Val Leu Asn Trp Ala Ala Gln Ile
485 490 495

Tyr Pro Gly Ile Lys Thr Lys His Leu Gly Ile Lys Thr Lys His His Leu
500 505 510

Cys Arg Leu Ile Arg Gly Lys Met Thr Leu Thr Glu Glu Val Gln Trp
515 520 525

Thr Glu Met Ala Glu Ala Glu Tyr Glu Glu Asn Lys Ile Ile Leu Ser
530 535 540

Gln Glu Gln Glu Gly Cys Tyr Tyr Gln Glu Gly Lys Pro Leu Glu Ala
545 550 555 560

Thr Val Ile Lys Ser Gln Asp Asn Gln Trp Ser Tyr Iys Ile His Gln

565

570

575

Glu Asp Lys Ile Leu Lys Val Gly Lys Phe Ala Lys Ile Lys Asn Thr
 580 585 590

His Thr Asn Gly Val Arg Leu Leu Ala His Val Ile Gln Lys Ile Gly
 595 600 605

Lys Glu Ala Ile Val Ile Trp Gly Gln Val Pro Lys Phe His Leu Pro
 610 615 620

Val Glu Lys Asp Val Trp Glu Gln Trp Trp Thr Asp Tyr Trp Gln Val
 625 630 635 640

Thr Trp Ile Pro Glu Trp Asp Phe Ile Ser Thr Pro Pro Leu Val Arg
 645 650 655

Leu Val Phe Asn Leu Val Lys Asp Pro Ile Glu Gly Glu Glu Thr Tyr
 660 665 670

Tyr Thr Asp Gly Ile Glu Gly Glu Glu Thr Tyr Tyr Thr Asp Gly Ser
 675 680 685

Cys Asn Lys Gln Ser Lys Glu Gly Lys Ala Gly Tyr Ile Thr Asp Arg
 690 695 700

Gly Lys Asp Lys Val Lys Val Leu Glu Gln Thr Thr Asn Gln Gln Ala
 705 710 715 720

Glu Leu Glu Ala Phe Leu Met Ala Leu Thr Asp Ser Gly Pro Lys Ala
 725 730 735

Asn Ile Ile Val Asp Ser Gln Tyr Val Met Gly Ile Ile Thr Gly Cys
 740 745 750

Pro Thr Glu Ser Glu Ser Arg Leu Val Asn Gln Ile Ile Glu Glu Met
 755 760 765

Ile Lys Lys Ser Glu Ile Tyr Val Ala Trp Val Pro Ala His Lys Gly
 770 775 780

Ile Gly Gly Asn Gln Glu Ile Asp His Leu Val Ser Gln Gly Ile Arg
 785 790 795 800

Gln Val Leu Phe Leu Glu Lys Ile Glu Pro Ala Gln Glu Glu His Asp
 805 810 815

Lys Tyr His Ser Asn Val Lys Glu Leu Val Phe Lys Phe Gly Leu Pro
820 825 830

Arg Ile Val Ala Arg Gln Ile Val Asp Thr Cys Asp Lys Cys His Arg
835 840 845

Gln Ile Val Asp Thr Cys Asp Lys Cys His Gln Lys Gly Glu Ala Ile
850 855 860

His Gly Gln Ala Asn Ser Asp Leu Gly Thr Trp Gln Met Asp Cys Thr
865 870 875 880

His Leu Glu Gly Lys Ile Ile Val Ala Val His Val Ala Ser Gly
885 890 895

Phe Ile Glu Ala Glu Val Ile Pro Gln Glu Thr Gly Arg Gln Thr Ala
900 905 910

Leu Phe Leu Leu Lys Leu Ala Gly Arg Trp Pro Ile Thr His Leu His
915 920 925

Thr Asp Asn Gly Ala Asn Phe Ala Ser Gln Glu Val Lys Met Val Ala
930 935 940

Trp Trp Ala Gly Ile Glu His Thr Phe Gly Val Pro Tyr Asn Pro Gln
945 950 955 960

Ser Gln Gly Val Val Glu Ala Met Asn His His Leu Lys Asn Gln Ile
965 970 975

Asp Arg Ile Arg Glu Gln Ala Asn Ser Val Glu Thr Ile Val Leu Met
980 985 990

Ala Val His Cys Met Asn Phe Lys Arg Arg Gly Gly Ile Gly Asp Met
995 1000 1005

Thr Pro Ala Glu Arg Leu Ile Asn Met Ile Met Thr Pro Ala Glu
1010 1015 1020

Arg Leu Ile Asn Met Ile Thr Thr Glu Gln Glu Ile Gln Phe Gln
1025 1030 1035

Gln Ser Lys Asn Ser Lys Phe Lys Asn Phe Arg Val Tyr Tyr Arg
1040 1045 1050

Glu Gly Arg Asp Gln Leu Trp Lys Gly Pro Gly Glu Leu Leu Trp
 1055 1060 1065

Lys Gly Glu Gly Ala Val Ile Leu Lys Val Gly Thr Asp Ile Lys
 1070 1075 1080

Val Val Pro Arg Arg Lys Ala Lys Ile Ile Lys Asp Tyr Gly Gly
 1085 1090 1095

Gly Lys Glu Val Asp Ser Ser Ser His Met Glu Asp Thr Gly Glu
 1100 1105 1110

Ala Arg Glu Val Ala
 1115

<210> 2186

<211> 92

<212> PRT

<213> Simian immunodeficiency virus

<400> 2186

Met Gly Gly Ala Ile Ser Met Arg Arg Ser Arg Pro Ser Gly Asp Leu
 1 5 10 15

Arg Gln Arg Leu Leu Arg Ala Arg Gly Glu Thr Tyr Gly Arg Leu Leu
 20 25 30

Gly Glu Val Glu Asp Gly Tyr Ser Gln Ser Pro Gly Gly Leu Asp Lys
 35 40 45

Gly Leu Ser Ser Leu Ser Cys Glu Gly Gln Lys Tyr Asn Gln Gly Gln
 50 55 60

Tyr Met Asn Thr Pro Trp Arg Asn Pro Ala Glu Glu Arg Glu Lys Leu
 65 70 75 80

Ala Tyr Arg Lys Gln Asn Met Asp Asp Ile Asp Glu
 85 90

<210> 2187

<211> 902

<212> PRT

<213> Simian immunodeficiency virus

<400> 2187

Met Arg Val Lys Gly Ile Arg Lys Asn Tyr Gln His Leu Trp Arg Gly
 1 5 10 15

Gly Thr Leu Leu Leu Gly Met Leu Met Ile Cys Ser Ala Val Glu Lys
20 25 30

Leu Trp Val Thr Val Tyr Tyr Gly Val Pro Ala Trp Lys Glu Ala Thr
35 40 45

Thr Thr Leu Phe Cys Ala Ser Asp Ala Lys Ala Tyr Asp Thr Glu Val
50 55 60

His Asn Val Trp Ala Thr His Ala Cys Val Pro Thr Asp Pro Asn Pro
65 70 75 80

Gln Glu Ile Val Leu Glu Asn Val Thr Glu Asn Phe Asn Met Trp Lys
85 90 95

Asn Asn Met Val Glu Gln Met His Glu Asp Ile Ile Ser Leu Trp Asp
100 105 110

Gln Ser Leu Glu Pro Cys Val Lys Leu Thr Pro Leu Cys Val Thr Leu
115 . 120 . 125

His Cys Thr Asn Leu Glu Asn Ala Thr Asn Thr Thr Ser Ser Asn Trp
 130 135 140

Lys Glu Met Asn Arg Gly Glu Ile Lys Asn Cys Ser Phe Asn Val Thr
145 150 155 160

Thr Ser Ile Gly Asn Lys Met Gln Lys Glu Thr Thr Ser Ile Gly Asn
165 170 175

Lys Met Gln Lys Glu Tyr Ala Leu Phe Tyr Arg Leu Asp Val Val Pro
180 185 190

Ile Asp Asn Asp Asn Thr Ser Tyr Asn Leu Ile Asn Cys Asn Thr Ser
195 200 205

Val Ile Thr Gln Ala Cys Pro Lys Val Ser Phe Glu Pro Ile Pro Ile
210 215 220

His Tyr Cys Ala Pro Ala Gly Phe Ala Ile Leu Lys Cys Asn Asp Lys
225 230 235 240

Lys Phe Asn Gly Ser Gly Pro Cys Ile Asn Val Ser Thr Val Gln Cys
245 250 255

Thr His Gly Ile Arg Pro Val Val Ser Thr Gln Leu Leu Leu Asn Gly
260 265 270

Ser Leu Ala Glu Glu Gly Val Val Ile Arg Ser Glu Asn Phe Thr Asp
275 280 285

Asn Val Lys Thr Ile Ile Val Gln Leu Lys Glu Ser Val Glu Ile Asn
290 295 300

Cys Thr Arg Pro Asn Asn Asn Thr Arg Lys Ser Ile Pro Ile Gly Pro
305 310 315 320

Gly Lys Ala Phe Tyr Ala Thr Gly Asp Ile Ile Gly Asp Ile Arg Gln
325 330 335

Ala His Cys Asn Ile Ile Gly Asp Ile Arg Gln Ala His Cys Asn Ile
340 345 350

Ser Gly Glu Lys Trp Asn Asn Thr Leu Lys Gln Ile Val Thr Lys Leu
355 360 365

Gln Ala Gln Phe Glu Asn Lys Thr Ile Val Phe Lys Gln Ser Ser Gly
370 375 380

Gly Asp Pro Glu Ile Val Met His Ser Phe Asn Cys Gly Gly Glu Phe
385 390 395 400

Phe Tyr Cys Asn Ser Thr Gln Leu Phe Asn Ser Thr Trp Asn Asn Thr
405 410 415

Ile Gly Pro Asn Asn Thr Asn Gly Thr Ile Thr Leu Pro Cys Arg Ile
420 425 430

Lys Gln Ile Ile Asn Arg Trp Gln Glu Val Gly Lys Ala Met Tyr Ala
435 440 445

Pro Pro Ile Arg Gly Gln Ile Arg Cys Ser Ser Asn Ile Thr Gly Leu
450 455 460

Leu Leu Thr Arg Asp Gly Gly Arg Glu Val Gly Asn Thr Thr Glu Ile
465 470 475 480

Phe Arg Pro Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu
485 490 495

Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Tyr Lys Val
 500 505 510

Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Lys Arg Arg
 515 520 525

Val Val Gln Arg Glu Lys Arg Ala Val Thr Leu Gly Ala Val Phe Leu
 530 535 540

Gly Phe Leu Gly Ala Ala Gly Ser Thr Met Gly Ala Ala Ser Leu Thr
 545 550 555 560

Leu Thr Val Gln Ala Arg Gln Leu Leu Ser Gly Ile Val Gln Gln Gln
 565 570 575

Asn Asn Leu Leu Arg Ala Ile Glu Ala Gln Gln Arg Leu Leu Gln Leu
 580 585 590

Thr Val Trp Gly Ile Lys Gln Leu Gln Ala Arg Val Leu Ala Val Glu
 595 600 605

Arg Tyr Leu Lys Asp Gln Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly
 610 615 620

Lys Leu Ile Cys Thr Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn
 625 630 635 640

Lys Ser Leu Asp Gln Ile Trp Asn Asn Met Thr Trp Met Glu Trp Glu
 645 650 655

Arg Glu Ile Gly Asn Tyr Thr Asn Leu Ile Tyr Thr Leu Ile Glu Glu
 660 665 670

Ser Gln Asn Gln Gln Glu Thr Leu Ile Glu Glu Ser Gln Asn Gln Gln
 675 680 685

Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser Leu
 690 695 700

Trp Asn Trp Leu Asp Ile Ser Lys Trp Leu Trp Tyr Ile Lys Ile Phe
 705 710 715 720

Ile Met Ile Val Gly Gly Leu Val Gly Leu Arg Ile Val Phe Thr Val
 725 730 735

Leu Ser Ile Val Asn Arg Val Arg Gln Gly Tyr Ser Pro Leu Ser Phe

740

745

750

Gln Thr Arg Phe Pro Ala Pro Arg Gly Leu Asp Arg Pro Glu Gly Ile
755 760 765

Glu Glu Glu Gly Gly Glu Arg Asp Arg Asp Arg Ser Arg Pro Leu Val
770 775 780

His Gly Leu Leu Ala Leu Ile Trp Asp Asp Leu Arg Ser Leu Cys Leu
 785 790 795 800

Phe Ser Tyr His Arg Leu Arg Asp Leu Ile Leu Ile Ala Ala Arg Ile
805 810 815

Val Glu Leu Leu Gly Arg Arg Gly Trp Glu Ala Leu Lys Tyr Trp Gly
 820 825 830

Asn Leu Leu Gln Tyr Trp Ile Gln Glu Leu Lys Asn Ser Ala Val Ser
 835 840 845

Trp Ile Gln Glu Leu Lys Asn Ser Ala Val Ser Leu Phe Gly Ala Ile
 850 855 860

Ala Ile Ala Val Ala Glu Gly Thr Asp Arg Ile Ile Glu Val Ala Gln
865 870 875 880

Arg Ile Gly Arg Ala Phe Leu His Ile Pro Arg Arg Ile Arg Gln Gly
885 890 895

Leu Glu Arg Thr Leu Leu
900

<210> 2188
<211> 533
<212> PRT
<213> Human immunodeficiency virus type 1
<400> 2188

Met Gly Ala Arg Ala Ser Val Leu Ser Gly Gly Glu Leu Asp Arg Trp
1 5 10 15

Glu Lys Ile Arg Leu Arg Pro Gly Gly Lys Lys Lys Tyr Lys Leu Lys
 20 25 30

His Ile Val Trp Ala Ser Arg Glu Leu Glu Arg Phe Ala Val Asn Pro
35 40 45

Gly Leu Leu Glu Thr Ser Glu Gly Cys Arg Gln Ile Leu Gly Gln Leu
 50 55 60

Gln Pro Ser Leu Gln Thr Gly Ser Glu Glu Leu Arg Ser Leu Tyr Asn
 65 70 75 80

Thr Val Ala Thr Leu Tyr Cys Val His Gln Arg Ile Glu Val Lys Asp
 85 90 95

Thr Lys Glu Ala Leu Glu Lys Ile Glu Glu Glu Gln Asn Lys Ser Lys
 100 105 110

Lys Lys Ala Gln Gln Ala Ala Ala Asp Thr Gly Asn Ser Ser Gln Val
 115 120 125

Ser Gln Asn Tyr Pro Ile Val Gln Asn Leu Gln Gly Gln Met Val His
 130 135 140

Gln Ala Ile Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Val Glu
 145 150 155 160

Glu Lys Ala Phe Ser Pro Glu Val Ile Pro Glu Glu Lys Ala Phe Ser
 165 170 175

Pro Glu Val Ile Pro Met Phe Ser Ala Leu Ser Glu Gly Ala Thr Pro
 180 185 190

Gln Asp Leu Asn Thr Met Leu Asn Thr Val Gly Gly His Gln Ala Ala
 195 200 205

Met Gln Met Leu Lys Glu Thr Ile Asn Glu Glu Ala Ala Glu Trp Asp
 210 215 220

Arg Leu His Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln Met Arg
 225 230 235 240

Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu Gln Glu
 245 250 255

Gln Ile Gly Trp Met Thr Asn Asn Pro Pro Ile Pro Val Gly Glu Ile
 260 265 270

Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg Met Tyr
 275 280 285

Ser Pro Thr Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu Pro Phe
 290 295 300

 Arg Asp Tyr Val Asp Arg Phe Tyr Lys Thr Leu Arg Ala Glu Gln Ala
 305 310 315 320

 Ser Gln Glu Val Lys Asn Trp Met Thr Glu Thr Leu Leu Val Gln Asn
 325 330 335

 Ala Asn Pro Asp Glu Thr Leu Leu Val Gln Asn Ala Asn Pro Asp Cys
 340 345 350

 Lys Thr Ile Leu Lys Ala Leu Gly Pro Ala Ala Thr Leu Glu Glu Met
 355 360 365

 Met Thr Ala Cys Gln Gly Val Gly Gly Pro Gly His Lys Ala Arg Val
 370 375 380

 Leu Ala Glu Ala Met Ser Gln Val Thr Asn Ser Ala Thr Ile Met Met
 385 390 395 400

 Gln Arg Gly Asn Phe Arg Asn Gln Arg Lys Thr Val Lys Cys Phe Asn
 405 410 415

 Cys Gly Lys Glu Gly His Ile Ala Lys Asn Cys Arg Ala Pro Arg Lys
 420 425 430

 Lys Gly Cys Trp Lys Cys Gly Lys Glu Gly His Gln Met Lys Asp Cys
 435 440 445

 Thr Glu Arg Gln Ala Asn Phe Leu Gly Lys Ile Trp Pro Ser His Lys
 450 455 460

 Gly Arg Pro Gly Asn Phe Leu Gln Ser Arg Pro Glu Pro Thr Ala Pro
 465 470 475 480

 Pro Glu Glu Ser Phe Arg Phe Gly Glu Glu Thr Thr Thr Pro Ser Gln
 485 490 495

 Lys Gln Glu Pro Ile Asp Lys Glu Leu Tyr Pro Leu Ala Glu Pro Ile
 500 505 510

 Asp Lys Glu Leu Tyr Pro Leu Ala Ser Leu Arg Ser Leu Phe Gly Asn
 515 520 525

 Asp Pro Ser Ser Gln

530

<210> 2189
<211> 217
<212> PRT
<213> Human immunodeficiency virus type 1
<400> 2189

Met Gly Gly Lys Trp Ser Lys Arg Ser Val Val Gly Trp Pro Thr Val
1 5 10 15

Arg Glu Arg Met Arg Arg Ala Glu Pro Ala Ala Asp Gly Val Gly Ala
20 25 30

Val Ser Arg Asp Leu Glu Lys His Gly Ala Ile Thr Ser Ser Asn Thr
35 40 45

Ala Ala Asn Asn Ala Asp Cys Ala Trp Leu Glu Ala Gln Glu Glu Glu
50 55 60

Glu Val Gly Phe Pro Val Arg Pro Gln Val Pro Leu Arg Pro Met Thr
65 70 75 80

Tyr Lys Ala Ala Val Asp Leu Ser His Phe Leu Lys Glu Lys Gly Gly
85 90 95

Leu Glu Gly Leu Ile Tyr Ser Gln Lys Arg Gln Asp Ile Leu Asp Leu
100 105 110

Trp Val Tyr His Thr Gln Gly Tyr Phe Pro Asp Trp Gln Asn Tyr Thr
115 120 125

Pro Gly Pro Gly Ile Arg Tyr Pro Leu Thr Phe Gly Trp Cys Phe Lys
130 135 140

Leu Val Pro Val Glu Pro Glu Lys Val Glu Glu Ala Asn Glu Gly Glu
145 150 155 160

Asn Asn Ser Leu Leu His Pro Met Ser Leu His Asn Asn Ser Leu Leu
165 170 175

His Pro Met Ser Leu His Gly Met Asp Asp Pro Glu Arg Glu Val Leu
180 185 190

Val Trp Lys Phe Asp Ser Arg Leu Ala Phe His His Met Ala Arg Glu
195 200 205

Leu His Pro Glu Tyr Tyr Lys Asp Cys
 210 215

<210> 2190
 <211> 1068
 <212> PRT
 <213> Human immunodeficiency virus type 1
 <400> 2190

Phe Phe Arg Glu Asp Leu Ala Phe Pro Gln Gly Lys Ala Arg Glu Phe
 1 5 10 15

Ser Ser Glu Gln Thr Arg Ala Asn Ser Pro Thr Arg Arg Glu Leu Gln
 20 25 30

Val Trp Gly Arg Asp Asn Asn Ser Leu Ser Glu Ala Gly Ala Asp Arg
 35 40 45

Gln Gly Thr Val Ser Phe Ser Phe Pro Gln Ile Thr Leu Trp Gln Arg
 50 55 60

Pro Leu Val Thr Ile Lys Ile Gly Gly Gln Leu Lys Glu Ala Leu Leu
 65 70 75 80

Asp Thr Gly Ala Asp Asp Thr Val Leu Glu Glu Met Asn Leu Pro Gly
 85 90 95

Arg Trp Lys Pro Lys Met Ile Gly Gly Ile Gly Gly Phe Ile Lys Val
 100 105 110

Arg Gln Tyr Asp Gln Ile Leu Ile Glu Ile Cys Gly His Lys Ala Ile
 115 120 125

Gly Thr Val Leu Val Gly Pro Thr Pro Val Asn Ile Ile Gly Arg Asn
 130 135 140

Leu Leu Thr Gln Ile Gly Cys Thr Leu Asn Phe Pro Ile Ser Pro Ile
 145 150 155 160

Glu Thr Val Pro Val Lys Leu Lys Pro Gly Met Glu Thr Val Pro Val
 165 170 175

Lys Leu Lys Pro Gly Met Asp Gly Pro Lys Val Lys Gln Trp Pro Leu
 180 185 190

Thr Glu Glu Lys Ile Lys Ala Leu Val Glu Ile Cys Thr Glu Met Glu

195

200

205

Lys Glu Gly Lys Ile Ser Lys Ile Gly Pro Glu Asn Pro Tyr Asn Thr
 210 215 220

Pro Val Phe Ala Ile Lys Lys Lys Asp Ser Thr Lys Trp Arg Lys Leu
 225 230 235 240

Val Asp Phe Arg Glu Leu Asn Lys Arg Thr Gln Asp Phe Trp Glu Val
 245 250 255

Gln Leu Gly Ile Pro His Pro Ala Gly Leu Lys Lys Lys Ser Val
 260 265 270

Thr Val Leu Asp Val Gly Asp Ala Tyr Phe Ser Val Pro Leu Asp Lys
 275 280 285

Asp Phe Arg Lys Tyr Thr Ala Phe Thr Ile Pro Ser Ile Asn Asn Glu
 290 295 300

Thr Pro Gly Ile Arg Tyr Gln Tyr Asn Val Leu Pro Gln Gly Trp Lys
 305 310 315 320

Gly Ser Pro Ala Ile Phe Gln Ser Ser Met Thr Lys Ile Leu Glu Pro
 325 330 335

Phe Arg Lys Gln Asn Pro Lys Ile Leu Glu Pro Phe Arg Lys Gln Asn
 340 345 350

Pro Asp Ile Val Ile Tyr Gln Tyr Met Asp Asp Leu Tyr Val Gly Ser
 355 360 365

Asp Leu Glu Ile Gly Gln His Arg Thr Lys Ile Glu Glu Leu Arg Gln
 370 375 380

His Leu Leu Arg Trp Gly Phe Thr Thr Pro Asp Lys Lys His Gln Lys
 385 390 395 400

Glu Pro Pro Phe Leu Trp Met Gly Tyr Glu Leu His Pro Asp Lys Trp
 405 410 415

Thr Val Gln Pro Ile Val Leu Pro Glu Lys Asp Ser Trp Thr Val Asn
 420 425 430

Asp Ile Gln Lys Leu Val Gly Lys Leu Asn Trp Ala Ser Gln Ile Tyr
 435 440 445

Ala Gly Ile Lys Val Lys Gln Leu Cys Lys Leu Leu Arg Gly Thr Lys
450 455 460

Ala Leu Thr Glu Val Ile Pro Leu Thr Glu Glu Ala Glu Leu Glu Leu
465 470 475 480

Ala Glu Asn Arg Glu Ile Leu Lys Glu Pro Val His Gly Val Tyr Tyr
485 490 495

Asp Pro Ser Lys Asp Leu Ile Ala Glu Ile Gln Lys Gln Gly Gln Gly
500 505 510

Gln Ile Ala Glu Ile Gln Lys Gln Gly Gln Gly Gln Trp Thr Tyr Gln
515 520 525

Ile Tyr Gln Glu Pro Phe Lys Asn Leu Lys Thr Gly Lys Tyr Ala Arg
530 535 540

Met Arg Gly Ala His Thr Asn Asp Val Lys Gln Leu Thr Glu Ala Val
545 550 555 560

Gln Lys Ile Ala Thr Glu Ser Ile Val Ile Trp Gly Lys Thr Pro Lys
565 570 575

Phe Lys Leu Pro Ile Gln Lys Glu Thr Trp Glu Ala Trp Trp Thr Glu
580 585 590

Tyr Trp Gln Ala Thr Trp Ile Pro Glu Trp Glu Phe Val Asn Thr Pro
595 600 605

Pro Leu Val Lys Leu Trp Tyr Gln Leu Glu Lys Glu Pro Ile Val Gly
610 615 620

Ala Glu Thr Phe Tyr Val Asp Gly Ala Ala Asn Arg Glu Thr Lys Leu
625 630 635 640

Gly Lys Ala Gly Tyr Val Thr Asp Arg Gly Arg Gln Lys Val Val Ser
645 650 655

Leu Thr Asp Thr Thr Asn Gln Lys Thr Glu Leu Gln Ala Ile His Leu
660 665 670

Ala Leu Gln Asp Ser Gly Leu Glu Val Asn Ile Val Leu Gln Asp Ser
675 680 685

Gly Leu Glu Val Asn Ile Val Thr Asp Ser Gln Tyr Ala Leu Gly Ile
 690 695 700

Ile Gln Ala Gln Pro Asp Lys Ser Glu Ser Glu Leu Val Ser Gln Ile
705 710 715 720

Ile Glu Gln Leu Ile Lys Lys Glu Lys Val Tyr Leu Ala Trp Val Pro
 725 730 735

Ala His Lys Gly Ile Gly Gly Asn Glu Gln Val Asp Lys Leu Val Ser
740 745 750

Ala Gly Ile Arg Lys Val Leu Phe Leu Asp Gly Ile Asp Lys Ala Gln
755 760 765

Glu Glu His Glu Lys Tyr His Ser Asn Trp Arg Ala Met Ala Ser Asp
770 775 780

Phe Asn Leu Pro Pro Val Val Ala Lys Glu Ile Val Ala Ser Cys Asp
785 790 795 800

Lys Cys Gln Leu Lys Gly Glu Ala Met His Gly Gln Val Asp Cys Ser
805 810 815

Pro Gly Ile Trp Gln Leu Asp Cys Thr His Leu Glu Gly Lys Ile Ile
 820 825 830

Leu Val Ala Val His Val Ala Ser Gly Tyr Ile Glu Ala Glu Val Ile
835 840 845

Pro Ala Glu Thr Gly Gln Glu Ala Glu Val Ile Pro Ala Glu Thr Gly
850 855 860

Gln Glu Thr Ala Tyr Phe Leu Leu Lys Leu Ala Gly Arg Trp Pro Val
865 870 875 880

Lys Thr Ile His Thr Asp Asn Gly Ser Asn Phe Thr Ser Thr Thr Val
885 890 895

Lys Ala Ala Cys Trp Trp Ala Gly Ile Lys Gln Glu Phe Gly Ile Pro
900 905 910

Tyr Asn Pro Gln Ser Gln Gly Val Val Glu Ser Met Asn Lys Glu Leu
 915 920 925

Lys Lys Ile Ile Gly Gln Val Arg Asp Gln Ala Glu His Leu Lys Thr
 930 935 940

Ala Val Gln Met Ala Val Phe Ile His Asn Phe Lys Arg Lys Gly Gly
 945 950 955 960

Ile Gly Gly Tyr Ser Ala Gly Glu Arg Ile Val Asp Ile Ile Ala Thr
 965 970 975

Asp Ile Gln Thr Lys Glu Leu Gln Lys Gln Ile Thr Lys Ile Gln Asn
 980 985 990

Phe Arg Val Tyr Arg Asp Ser Arg Asp Pro Leu Trp Lys Gly Pro Ala
 995 1000 1005

Lys Leu Leu Trp Lys Gly Glu Gly Ala Val Val Ile Gln Asp Asn
 1010 1015 1020

Ser Asp Ile Gly Ala Val Val Ile Gln Asp Asn Ser Asp Ile Lys
 1025 1030 1035

Val Val Pro Arg Arg Lys Ala Lys Ile Ile Arg Asp Tyr Gly Lys
 1040 1045 1050

Gln Met Ala Gly Asp Asp Cys Val Ala Ser Arg Gln Asp Glu Asp
 1055 1060 1065

<210> 2191
<211> 117
<212> PRT
<213> Human immunodeficiency virus type 1
<400> 2191

Met Ala Gly Arg Ser Gly Asp Ser Asp Glu Glu Leu Leu Lys Thr Val
 1 5 10 15

Arg Leu Ile Lys Phe Leu Tyr Gln Ser Asn Pro Pro Pro Ser Pro Glu
 20 25 30

Gly Thr Arg Gln Ala Arg Arg Asn Arg Arg Arg Arg Trp Arg Glu Arg
 35 40 45

Gln Arg Gln Ile Arg Ser Ile Ser Glu Trp Ile Leu Ser Thr Tyr Leu
 50 55 60

Gly Arg Pro Ala Glu Pro Val Pro Leu Gln Leu Pro Pro Leu Glu Arg
 65 70 75 80

Leu Thr Leu Asp Cys Asn Glu Asp Cys Gly Thr Ser Gly Thr Gln Gly
85 90 95

Val Gly Ser Pro Gln Ile Leu Val Glu Ser Pro Ala Val Leu Glu Ser
100 105 110

Gly Thr Lys Glu Glu
115

<210> 2192
<211> 102
<212> PRT
<213> Human immunodeficiency virus type 1
<400> 2192

Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
1 5 10 15

Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
20 25 30

His Cys Gln Val Cys Phe Ile Thr Lys Gly Leu Gly Ile Ser Tyr Gly
35 40 45

Arg Lys Lys Arg Arg Gln Arg Arg Arg Ala Pro Gln Asp Ser Gln Thr
50 55 60

His Gln Val Ser Leu Ser Lys Gln Pro Ala Ser Gln Pro Arg Gly Asp
65 70 75 80

Pro Thr Gly Pro Lys Glu Ser Lys Lys Lys Val Glu Arg Glu Thr Glu
85 90 95

Thr Asp Pro Val Asp Gln
100

<210> 2193
<211> 203
<212> PRT
<213> Human immunodeficiency virus type 1
<400> 2193

Met Glu Asn Arg Trp Gln Val Met Ile Val Trp Gln Val Asp Arg Met
1 5 10 15

Arg Ile Arg Thr Trp Lys Ser Leu Val Lys His His Met Tyr Ile Ser

20

25

30

Arg Lys Ala Lys Gly Trp Phe Tyr Arg His His Tyr Glu Ser Thr His
 35 40 45

Pro Arg Ile Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu
 50 55 60

Val Ile Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
 65 70 75 80

Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Lys Arg Tyr Ser Thr
 85 90 95

Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
 100 105 110

Asp Cys Phe Ser Glu Ser Ala Ile Arg Asn Ala Ile Leu Gly His Ile
 115 120 125

Val Ser Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser
 130 135 140

Leu Gln Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
 145 150 155 160

Pro Pro Leu Pro Ser Val Thr Lys Leu Thr Glu Pro Pro Leu Pro Ser
 165 170 175

Val Thr Lys Leu Thr Glu Asp Arg Trp Asn Lys Pro Gln Lys Thr Lys
 180 185 190

Gly His Arg Gly Ser His Thr Met Asn Gly His
 195 200

<210> 2194
<211> 96
<212> PRT
<213> Human immunodeficiency virus type 1

<400> 2194

Met Glu Gln Ala Pro Glu Asp Gln Gly Pro Gln Arg Glu Pro Tyr Asn
 1 5 10 15

Glu Trp Thr Leu Glu Leu Glu Leu Lys Ser Glu Ala Val Arg
 20 25 30

His Phe Pro Arg Ile Trp Leu His Gly Leu Gly Gln His Ile Tyr Glu
 35 40 45

Thr Tyr Gly Asp Thr Trp Ala Gly Val Glu Ala Ile Ile Arg Ile Leu
 50 55 60

Gln Gln Leu Leu Phe Ile His Phe Arg Ile Gly Cys Gln His Ser Arg
 65 70 75 80

Ile Gly Ile Thr Arg Gln Arg Ala Arg Asn Gly Ala Ser Arg Ser
 85 90 95

<210> 2195

<211> 81

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 2195

Met Gln Ser Leu Gln Ile Leu Ala Ile Val Ala Leu Val Val Ala Ala
 1 5 10 15

Ile Ile Ala Ile Val Val Trp Ser Ile Val Phe Ile Glu Tyr Arg Lys
 20 25 30

Ile Leu Arg Gln Arg Lys Ile Asp Arg Leu Ile Asp Arg Ile Arg Glu
 35 40 45

Arg Ala Glu Asp Ser Gly Asn Glu Ser Glu Gly Asp Gln Glu Glu Leu
 50 55 60

Ser Ala Leu Val Glu Met Gly His His Ala Pro Trp Asp Val Asp Asp
 65 70 75 80

Leu

<210> 2196

<211> 3261

<212> PRT

<213> Hepatitis C virus

<400> 2196

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
 1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
 20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Thr Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu
130 135 140

Gly Gly Ala Ala Arg Ala Leu Gly Ala Pro Leu Gly Gly Ala Ala Arg
145 150 155 160

Ala Leu Ala His Gly Val Arg Val Leu Glu Asp Gly Val Asn Tyr Ala
165 170 175

Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile Phe Leu Leu Ala Leu
180 185 190

Leu Ser Cys Leu Thr Val Pro Ala Ser Ala Tyr Gln Val Arg Asn Ser
195 200 205

Ser Gly Leu Tyr His Val Thr Asn Asp Cys Pro Asn Ser Ser Ile Val
210 215 220

Tyr Glu Ala Ala Asp Ala Ile Leu His Thr Pro Gly Cys Val Pro Cys
225 230 235 240

Val Arg Glu Gly Asn Ala Ser Arg Cys Trp Val Ala Val Thr Pro Thr
245 250 255

Val Ala Thr Arg Asn Ala Ser Arg Cys Trp Val Ala Val Thr Pro Thr
260 265 270

Val Ala Thr Arg Asp Gly Lys Leu Pro Thr Thr Gln Leu Arg Arg His
 275 280 285

Ile Asp Leu Leu Val Gly Ser Ala Thr Leu Cys Ser Ala Leu Tyr Val
 290 295 300

Gly Asp Leu Cys Gly Ser Val Ala Leu Tyr Val Gly Asp Leu Cys Gly
 305 310 315 320

Ser Val Phe Leu Val Gly Gln Leu Phe Thr Phe Ser Pro Arg Arg His
 325 330 335

Trp Thr Thr Gln Asp Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr
 340 345 350

Gly His Arg Met Ala Trp Asp Met Met Asn Trp Ser Pro Thr Ala
 355 360 365

Ala Leu Val Val Ala Gln Leu Leu Arg Ile Pro Gln Ala Ile Met Asp
 370 375 380

Met Ile Ala Gly Ala His Trp Gly Val Leu Ala Gly Ile Ala Tyr Phe
 385 390 395 400

Ser Met Val Gly Asn Trp Ala Lys Val Leu Val Val Leu Leu Leu Phe
 405 410 415

Ala Gly Val Asp Ala Glu Thr His Val Thr Gly Gly Ser Ala Gly Arg
 420 425 430

Thr Thr Ala Gly Leu Val Gly Leu Leu Thr Pro Gly Ala Lys Gln Asn
 435 440 445

Ile Gln Leu Ile Asn Thr Asn Gly Ser Trp His Ile Asn Ser Ile Asn
 450 455 460

Thr Asn Gly Ser Trp His Ile Asn Ser Thr Ala Leu Asn Cys Asn Glu
 465 470 475 480

Ser Leu Asn Thr Gly Trp Leu Ala Gly Leu Phe Tyr Gln His Lys Phe
 485 490 495

Asn Ser Ser Gly Cys Pro Glu Arg Leu Ala Ser Cys Arg Arg Leu Thr
 500 505 510

Asp Phe Ala Gln Gly Trp Gly Pro Ile Ser Tyr Ala Asn Gly Ser Gly
 515 520 525

Leu Asp Glu Arg Pro Tyr Cys Trp His Tyr Pro Pro Arg Pro Cys Gly
 530 535 540

Ile Val Pro Ala Lys Ser Val Cys Gly Pro Val Tyr Cys Phe Thr Pro
 545 550 555 560

Ser Pro Val Val Val Gly Thr Thr Asp Arg Ser Gly Ala Pro Thr Tyr
 565 570 575

Ser Trp Gly Ala Asn Asp Thr Asp Val Phe Val Leu Asn Asn Thr Arg
 580 585 590

Pro Pro Leu Gly Asn Trp Phe Gly Cys Thr Trp Met Asn Ser Thr Gly
 595 600 605

Phe Thr Lys Val Cys Trp Met Asn Ser Thr Gly Phe Thr Lys Val Cys
 610 615 620

Gly Ala Pro Pro Cys Val Ile Gly Gly Val Gly Asn Asn Thr Leu Leu
 625 630 635 640

Cys Pro Thr Asp Cys Phe Arg Lys His Pro Glu Ala Thr Tyr Ser Arg
 645 650 655

Cys Gly Ser Gly Pro Trp Ile Thr Pro Arg Cys Met Val Asp Tyr Pro
 660 665 670

Tyr Arg Leu Trp His Tyr Pro Cys Thr Ile Asn Tyr Thr Ile Phe Lys
 675 680 685

Val Arg Met Tyr Val Gly Val Glu His Arg Leu Glu Ala Ala Cys
 690 695 700

Asn Trp Thr Arg Gly Glu Arg Cys Asp Leu Glu Asp Arg Asp Arg Ser
 705 710 715 720

Glu Leu Ser Pro Leu Leu Leu Ser Thr Thr Gln Trp Gln Val Leu Pro
 725 730 735

Cys Ser Phe Thr Thr Leu Pro Ala Leu Ser Thr Gly Leu Ile His Leu
 740 745 750

His Gln Asn Ile Val Asp Val Gln Tyr Leu Tyr Gly Gln Asn Ile Val

755

760

765

Asp Val Gln Tyr Leu Tyr Gly Val Gly Ser Ser Ile Ala Ser Trp Ala
 770 775 780

Ile Lys Trp Glu Tyr Val Val Leu Leu Phe Leu Leu Leu Ala Asp Ala
 785 790 795 800

Arg Val Cys Ser Cys Leu Trp Met Met Leu Leu Ile Ser Gln Ala Glu
 805 810 815

Ala Ala Leu Glu Asn Leu Val Ile Leu Asn Ala Ala Ser Leu Ala Gly
 820 825 830

Thr His Gly Leu Val Ser Phe Leu Val Phe Phe Cys Phe Ala Trp Tyr
 835 840 845

Leu Lys Gly Arg Trp Val Pro Gly Ala Val Tyr Ala Phe Tyr Gly Met
 850 855 860

Trp Pro Leu Leu Leu Leu Leu Ala Leu Pro Gln Arg Ala Tyr Ala
 865 870 875 880

Leu Asp Thr Glu Val Ala Ala Ser Cys Gly Gly Val Val Leu Val Gly
 885 890 895

Leu Met Ala Leu Thr Leu Ser Pro Tyr Tyr Lys Arg Tyr Ile Ser Trp
 900 905 910

Cys Met Trp Tyr Tyr Lys Arg Tyr Ile Ser Trp Cys Met Trp Trp Leu
 915 920 925

Gln Tyr Phe Leu Thr Arg Val Glu Ala Gln Leu His Val Trp Val Pro
 930 935 940

Pro Leu Asn Val Arg Gly Gly Arg Asp Ala Val Ile Leu Leu Met Cys
 945 950 955 960

Val Val His Pro Thr Leu Val Phe Asp Ile Thr Lys Leu Leu Leu Ala
 965 970 975

Ile Phe Gly Pro Leu Trp Ile Leu Gln Ala Ser Leu Leu Lys Val Pro
 980 985 990

Tyr Phe Val Arg Val Gln Gly Leu Leu Arg Ile Cys Ala Leu Ala Arg
 995 1000 1005

Lys Ile Ala Gly Gly His Tyr Val Gln Met Ala Ile Ile Lys Leu
1010 1015 1020

Gly Ala Leu Thr Gly Thr Tyr Val Tyr Asn His Leu Thr Pro Leu
1025 1030 1035

Arg Asp Trp Ala His Asn Gly Leu Arg Asp Leu Ala Val Ala Val
1040 1045 1050

Glu Pro Val Val Phe Ser Arg Met Glu Thr Lys Leu Ile Val Val
1055 1060 1065

Phe Ser Arg Met Glu Thr Lys Leu Ile Thr Trp Gly Ala Asp Thr
1070 1075 1080

Ala Ala Cys Gly Asp Ile Ile Asn Gly Leu Pro Val Ser Ala Arg
1085 1090 1095

Arg Gly Gln Glu Ile Leu Leu Gly Pro Ala Asp Gly Met Val Ser
1100 1105 1110

Lys Gly Trp Arg Leu Leu Ala Pro Ile Thr Ala Tyr Ala Gln Gln
1115 1120 1125

Thr Arg Gly Leu Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly Arg
1130 1135 1140

Asp Lys Asn Gln Val Glu Gly Glu Val Gln Ile Val Ser Thr Ala
1145 1150 1155

Thr Gln Thr Phe Leu Ala Thr Cys Ile Asn Gly Val Cys Trp Thr
1160 1165 1170

Val Tyr His Gly Ala Gly Thr Arg Thr Ile Ala Ser Pro Lys Gly
1175 1180 1185

Pro Val Ile Gln Met Tyr Thr Asn Val Asp Gln Asp Leu Val Gly
1190 1195 1200

Trp Pro Ala Pro Gln Gly Ser Asp Leu Val Gly Trp Pro Ala Pro
1205 1210 1215

Gln Gly Ser Arg Ser Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp
1220 1225 1230

Leu Tyr Leu Val Thr Arg His Ala Asp Val Ile Pro Val Arg Arg
 1235 1240 1245

Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro Arg Pro Ile Ser
 1250 1255 1260

Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys Pro Ala Gly
 1265 1270 1275

His Ala Val Gly Leu Phe Arg Ala Ala Val Cys Thr Arg Gly Val
 1280 1285 1290

Ala Lys Ala Val Asp Phe Ile Pro Val Glu Asn Leu Glu Thr Thr
 1295 1300 1305

Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro Ala Val
 1310 1315 1320

Pro Gln Ser Phe Gln Val Ala His Leu His Ala Pro Thr Gly Ser
 1325 1330 1335

Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr
 1340 1345 1350

Lys Val Leu Val Leu Asn Pro Ser Gln Gly Tyr Lys Val Leu Val
 1355 1360 1365

Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met
 1370 1375 1380

Ser Lys Ala His Gly Val Asp Pro Asn Ile Arg Thr Gly Val Arg
 1385 1390 1395

Thr Ile Thr Thr Gly Ser Pro Ile Thr Tyr Ser Thr Tyr Gly Lys
 1400 1405 1410

Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile
 1415 1420 1425

Ile Cys Asp Glu Cys His Ser Thr Asp Ala Thr Ser Ile Leu Gly
 1430 1435 1440

Ile Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu
 1445 1450 1455

Val Val Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Ser
 1460 1465 1470

 His Pro Asn Ile Glu Glu Val Ala Leu Ser Thr Thr Gly Glu Ile
 1475 1480 1485

 Pro Phe Tyr Gly Lys Ala Ile Pro Leu Glu Val Ile Lys Gly Gly
 1490 1495 1500

 Arg His Leu Ile Phe Cys His Ser Lys Gly Gly Arg His Leu Ile
 1505 1510 1515

 Phe Cys His Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu
 1520 1525 1530

 Val Ala Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp
 1535 1540 1545

 Val Ser Val Ile Pro Thr Ser Gly Asp Val Val Val Val Ser Thr
 1550 1555 1560

 Asp Ala Leu Met Thr Gly Phe Thr Gly Asp Phe Asp Ser Val Ile
 1565 1570 1575

 Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp
 1580 1585 1590

 Pro Thr Phe Thr Ile Glu Thr Thr Thr Leu Pro Gln Asp Ala Val
 1595 1600 1605

 Ser Arg Thr Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro Gly
 1610 1615 1620

 Ile Tyr Arg Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe
 1625 1630 1635

 Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp
 1640 1645 1650

 Tyr Glu Leu Thr Pro Ala Glu Gly Cys Ala Trp Tyr Glu Leu Thr
 1655 1660 1665

 Pro Ala Glu Thr Thr Val Arg Leu Arg Ala Tyr Met Asn Thr Pro
 1670 1675 1680

 Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly Val

1685	1690	1695
Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr		
1700	1705	1710
Lys Gln Ser Gly Glu Asn Phe Pro Tyr Leu Val Ala Tyr Gln Ala		
1715	1720	1725
Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln		
1730	1735	1740
Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro		
1745	1750	1755
Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val Thr		
1760	1765	1770
Leu Thr His Pro Ile Thr Lys Tyr Ile Met Thr Cys Met Ser Ala		
1775	1780	1785
Asp Leu Glu Val Val Thr Ser Thr Trp Val Leu Val Gly Gly Val		
1790	1795	1800
Leu Ala Ala Leu Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu		
1805	1810	1815
Ala Ala Tyr Cys Leu Ser Thr Gly Cys Val Val Ile Val Gly Arg		
1820	1825	1830
Ile Val Leu Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val		
1835	1840	1845
Leu Tyr Gln Glu Phe Asp Glu Met Glu Glu Cys Ser Gln His Leu		
1850	1855	1860
Pro Tyr Ile Glu Gln Gly Met Met Leu Ala Glu Gln Phe Lys Gln		
1865	1870	1875
Lys Ala Leu Gly Leu Leu Gln Thr Ala Ser Arg Gln Ala Glu Val		
1880	1885	1890
Ile Thr Pro Ala Val Gln Thr Asn Trp Gln Lys Leu Glu Val Phe		
1895	1900	1905
Trp Ala Lys His Met Trp Asn Phe Ile Ser Gly Ile Gln Tyr Leu		
1910	1915	1920

Ala Gly Leu Ser Thr Leu Pro Gly Asn Pro Ala Ile Ala Ser Leu
 1925 1930 1935

Met Ala Phe Thr Ala Ala Ala Ile Ala Ser Leu Met Ala Phe Thr
 1940 1945 1950

Ala Ala Val Thr Ser Pro Leu Thr Thr Gly Gln Thr Leu Leu Phe
 1955 1960 1965

Asn Ile Leu Gly Gly Trp Val Ala Ala Gln Leu Ala Ala Pro Gly
 1970 1975 1980

Ala Ala Thr Ala Phe Val Gly Ala Gly Leu Ala Gly Ala Ala Ile
 1985 1990 1995

Gly Ser Val Gly Leu Gly Lys Val Leu Val Asp Ile Leu Ala Gly
 2000 2005 2010

Tyr Gly Ala Gly Val Ala Gly Ala Leu Val Ala Phe Lys Ile Met
 2015 2020 2025

Ser Gly Glu Val Pro Ser Thr Glu Asp Leu Val Asn Leu Leu Pro
 2030 2035 2040

Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val Val Cys Ala
 2045 2050 2055

Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala Val Gln
 2060 2065 2070

Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His Val
 2075 2080 2085

Ser Pro Thr His Tyr Val Pro Gly Asn His Val Ser Pro Thr His
 2090 2095 2100

Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val Thr Ala Ile Leu
 2105 2110 2115

Ser Ser Leu Thr Val Thr Gln Leu Leu Arg Arg Leu His Gln Trp
 2120 2125 2130

Ile Ser Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp Leu Arg
 2135 2140 2145

Asp Ile Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys Thr
 2150 2155 2160

Trp Leu Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe
 2165 2170 2175

Val Ser Cys Gln Arg Gly Tyr Arg Gly Val Trp Arg Gly Asp Gly
 2180 2185 2190

Ile Met His Thr Arg Cys His Cys Gly Ala Glu Ile Thr Gly His
 2195 2200 2205

Val Lys Asn Gly Thr Met Arg Ile Val Gly Pro Arg Thr Cys Arg
 2210 2215 2220

Asn Met Trp Ser Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly
 2225 2230 2235

Pro Cys Thr Pro Leu Pro Ala Pro Thr Thr Gly Pro Cys Thr Pro
 2240 2245 2250

Leu Pro Ala Pro Asn Tyr Lys Phe Ala Leu Trp Arg Val Ser Ala
 2255 2260 2265

Glu Glu Tyr Val Glu Ile Arg Arg Val Gly Asp Phe His Tyr Val
 2270 2275 2280

Ser Gly Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln Ile Pro
 2285 2290 2295

Ser Pro Glu Phe Phe Thr Glu Leu Asp Gly Val Arg Leu His Arg
 2300 2305 2310

Phe Ala Pro Pro Cys Lys Pro Leu Leu Arg Glu Glu Val Ser Phe
 2315 2320 2325

Arg Val Gly Leu His Glu Tyr Pro Val Gly Ser Gln Leu Pro Cys
 2330 2335 2340

Glu Pro Glu Pro Asp Val Ala Val Leu Thr Ser Met Leu Thr Asp
 2345 2350 2355

Pro Ser His Ile Thr Ala Glu Ala Ala Gly Arg Arg Leu Ala Arg
 2360 2365 2370

Gly Ser Pro Pro Ser Met Ala Ser Ser Ser Ala Ser Gln Leu Ser
 2375 2380 2385

Ala Pro Ser Leu Lys Ala Thr Cys Thr Leu Ser Ala Pro Ser Leu
 2390 2395 2400

Lys Ala Thr Cys Thr Ala Asn His Asp Ser Pro Asp Ala Glu Leu
 2405 2410 2415

Ile Glu Ala Asn Leu Leu Trp Arg Gln Glu Met Gly Gly Asn Ile
 2420 2425 2430

Thr Arg Val Glu Ser Glu Asn Lys Val Val Ile Leu Asp Ser Phe
 2435 2440 2445

Asp Pro Leu Val Ala Glu Glu Asp Glu Arg Glu Val Ser Val Pro
 2450 2455 2460

Ala Glu Ile Leu Arg Lys Ser Arg Arg Phe Ala Arg Ala Leu Pro
 2465 2470 2475

Val Trp Ala Arg Pro Asp Tyr Asn Pro Pro Leu Val Glu Thr Trp
 2480 2485 2490

Lys Lys Pro Asp Tyr Glu Pro Pro Val Val His Gly Cys Pro Leu
 2495 2500 2505

Pro Pro Pro Arg Ser Pro Pro Val Pro Pro Pro Arg Lys Lys Arg
 2510 2515 2520

Thr Val Val Leu Thr Glu Ser Thr Leu Ser Thr Ala Leu Ala Glu
 2525 2530 2535

Leu Ala Thr Lys Ser Phe Gly Ser Ser Ser Glu Leu Ala Thr Lys
 2540 2545 2550

Ser Phe Gly Ser Ser Ser Thr Ser Gly Ile Thr Gly Asp Asn Thr
 2555 2560 2565

Thr Thr Ser Ser Glu Pro Ala Pro Ser Gly Cys Pro Pro Asp Ser
 2570 2575 2580

Asp Val Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu Gly Glu Pro
 2585 2590 2595

Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Pro Gly Asp Ser Thr

2600	2605	2610
Val Ser Ser Gly Ala Asp Thr Glu Asp Val Val Cys Cys Ser Met		
2615	2620	2625
Ser Tyr Ser Trp Thr Gly Ala Leu Val Thr Pro Cys Ala Ala Glu		
2630	2635	2640
Glu Gln Lys Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg		
2645	2650	2655
His His Asn Leu Val Tyr Ser Thr Thr Ser Arg Ser Ala Cys Gln		
2660	2665	2670
Arg Tyr Ser Thr Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys		
2675	2680	2685
Val Thr Phe Asp Arg Leu Gln Val Leu Asp Ser His Tyr Gln Asp		
2690	2695	2700
Val Leu Lys Glu Val Lys Ala Ala Ala Ser Lys Val Lys Ala Asn		
2705	2710	2715
Leu Leu Ser Val Glu Glu Ala Cys Ser Leu Thr Pro Pro His Ser		
2720	2725	2730
Ala Lys Ser Lys Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His		
2735	2740	2745
Ala Arg Lys Ala Val Ala His Ile Asn Ser Val Trp Lys Asp Leu		
2750	2755	2760
Leu Glu Asp Ser Val Thr Pro Ile Asp Thr Thr Ile Met Ala Lys		
2765	2770	2775
Asn Glu Val Phe Cys Val Gln Pro Glu Lys Gly Gly Arg Lys Pro		
2780	2785	2790
Ala Arg Leu Ile Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu		
2795	2800	2805
Lys Met Ala Leu Tyr Asp Val Val Ser Lys Leu Pro Leu Ala Val		
2810	2815	2820
Met Gly Val Val Ser Lys Leu Pro Leu Ala Val Met Gly Ser Ser		
2825	2830	2835

Tyr Gly Phe Gln Tyr Ser Pro Gly Gln Arg Val Glu Phe Leu Val
 2840 2845 2850

Gln Ala Trp Lys Ser Lys Lys Thr Pro Met Gly Phe Ser Tyr Asp
 2855 2860 2865

Thr Arg Cys Phe Asp Ser Thr Val Thr Glu Ser Asp Ile Arg Thr
 2870 2875 2880

Glu Glu Ala Ile Tyr Gln Cys Cys Asp Leu Asp Pro Gln Ala Arg
 2885 2890 2895

Val Ala Ile Lys Ser Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro
 2900 2905 2910

Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr Arg Arg Cys Arg
 2915 2920 2925

Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr Cys
 2930 2935 2940

Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu Gln Asp
 2945 2950 2955

Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys Glu
 2960 2965 2970

Ser Ala Gly Asp Asp Leu Val Val Ile Cys Glu Ser Ala Gly Val
 2975 2980 2985

Gln Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr Glu Ala Met Thr
 2990 2995 3000

Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln Pro Glu Tyr Asp
 3005 3010 3015

Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val Ala His
 3020 3025 3030

Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro Thr
 3035 3040 3045

Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro
 3050 3055 3060

Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe Ala Pro Thr Leu
 3065 3070 3075

Trp Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Val Leu Ile
 3080 3085 3090

Ala Arg Asp Gln Leu Glu Gln Ala Leu Asn Cys Glu Ile Tyr Gly
 3095 3100 3105

Ala Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro Pro Cys Tyr Ser
 3110 3115 3120

Ile Glu Pro Leu Asp Leu Pro Pro Ile Ile Gln Arg Leu His Gly
 3125 3130 3135

Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn
 3140 3145 3150

Arg Val Ala Ala Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg
 3155 3160 3165

Ala Trp Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ser
 3170 3175 3180

Arg Gly Gly Arg Ala Ala Ile Cys Gly Lys Tyr Leu Phe Asn Trp
 3185 3190 3195

Ala Val Arg Thr Lys Leu Lys Leu Thr Pro Ile Ala Ala Ala Gly
 3200 3205 3210

Arg Leu Asp Leu Ser Gly Trp Phe Thr Ala Gly Tyr Ser Gly Gly
 3215 3220 3225

Asp Ile Tyr His Ser Val Ser His Ala Arg Pro Arg Trp Phe Trp
 3230 3235 3240

Phe Cys Leu Leu Leu Ala Ala Gly Val Gly Ile Tyr Leu Leu
 3245 3250 3255

Pro Asn Arg
 3260

<210> 2197
 <211> 215
 <212> PRT
 <213> Human immunodeficiency virus type 1

<400> 2197

Lys Val Lys Gln Trp Pro Leu Thr Glu Glu Lys Ile Lys Ala Leu Val
 1 5 10 15

Glu Ile Cys Thr Glu Met Glu Lys Glu Gly Lys Ile Ser Lys Ile Gly
 20 25 30

Pro Glu Asn Pro Tyr Asn Thr Pro Val Phe Ala Ile Lys Lys Lys Asp
 35 40 45

Ser Thr Lys Trp Arg Lys Leu Val Asp Phe Arg Glu Leu Asn Lys Arg
 50 55 60

Thr Gln Asp Phe Trp Glu Val Gln Leu Gly Ile Pro His Pro Ala Gly
 65 70 75 80

Leu Lys Lys Lys Ser Val Thr Val Leu Asp Val Gly Asp Ala Tyr
 85 90 95

Phe Ser Val Pro Leu Asp Lys Asp Phe Arg Lys Tyr Thr Ala Phe Thr
 100 105 110

Ile Pro Ser Ile Asn Asn Glu Thr Pro Gly Ile Arg Tyr Gln Tyr Asn
 115 120 125

Val Leu Pro Gln Gly Trp Lys Gly Ser Pro Ala Ile Phe Gln Ser Ser
 130 135 140

Met Thr Lys Ile Leu Glu Pro Phe Arg Lys Gln Asn Pro Asp Ile Val
 145 150 155 160

Ile Tyr Gln Tyr Met Asp Asp Leu Tyr Val Gly Ser Asp Leu Glu Ile
 165 170 175

Gly Gln His Arg Thr Lys Ile Glu Glu Leu Arg Gln His Leu Leu Arg
 180 185 190

Trp Gly Phe Thr Thr Pro Asp Lys Lys His Gln Lys Glu Pro Pro Phe
 195 200 205

Leu Trp Met Gly Tyr Glu Leu
 210 215

<210> 2198

<211> 17

Pro Val Phe Ala Ile Lys Lys Lys Asn Ser Thr Lys Trp Arg Lys Leu
1 5 10 15

Val

<210> 2202
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 5

<400> 2202

Phe Ala Ile Lys Lys Lys Asp Ser Asp Lys Trp Arg Lys Leu Val Asp
1 5 10 15

Phe

<210> 2203
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 6

<400> 2203

Ala Ile Lys Lys Lys Asp Ser Thr Arg Trp Arg Lys Leu Val Asp Phe
1 5 10 15

Arg

<210> 2204
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 7

<400> 2204

Lys Asp Ser Thr Lys Trp Arg Lys Val Val Asp Phe Arg Glu Leu Asn
1 5 10 15

Lys

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 1

<400> 2198

Ala Leu Val Glu Ile Cys Thr Glu Leu Glu Lys Glu Gly Lys Ile Ser
1 5 10 15

Lys

<210> 2199

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 2

<400> 2199

Glu Ile Cys Thr Glu Met Glu Lys Asp Gly Lys Ile Ser Lys Ile Gly
1 5 10 15

Pro

<210> 2200

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 3

<400> 2200

Asn Thr Pro Val Phe Ala Ile Lys Arg Lys Asp Ser Thr Lys Trp Arg
1 5 10 15

Lys

<210> 2201

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 4

<400> 2201

<210> 2205

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 8

<400> 2205

Asp Ser Thr Lys Trp Arg Lys Leu Thr Asp Phe Arg Glu Leu Asn Lys
1 5 10 15

Arg

<210> 2206

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 9

<400> 2206

Val Gln Leu Gly Ile Pro His Pro Gly Gly Leu Lys Lys Lys Lys Ser
1 5 10 15

Val

<210> 2207

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 10

<400> 2207

Pro His Pro Ala Gly Leu Lys Lys Asn Lys Ser Val Thr Val Leu Asp
1 5 10 15

Val

<210> 2208

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 11

<400> 2208

Asp Val Gly Asp Ala Tyr Phe Ser Ile Pro Leu Asp Lys Asp Phe Arg
1 5 10 15

Lys

<210> 2209

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 12

<400> 2209

Arg Tyr Gln Tyr Asn Val Leu Pro Met Gly Trp Lys Gly Ser Pro Ala
1 5 10 15

Ile

<210> 2210

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 13

<400> 2210

Lys Gln Asn Pro Asp Ile Val Ile Cys Gln Tyr Met Asp Asp Leu Tyr
1 5 10 15

Val

<210> 2211

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 RT peptide 14

<400> 2211

Pro Asp Ile Val Ile Tyr Gln Tyr Val Asp Asp Leu Tyr Val Gly Ser
1 5 10 15

Asp

<210> 2212
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 15

<400> 2212

Pro Asp Ile Val Ile Tyr Gln Tyr Ile Asp Asp Leu Tyr Val Gly Ser
1 5 10 15

Asp

<210> 2213
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 16

<400> 2213

Ile Tyr Gln Tyr Met Asp Asp Leu Leu Val Gly Ser Asp Leu Glu Ile
1 5 10 15

Gly

<210> 2214
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 17

<400> 2214

Gln Tyr Met Asp Asp Leu Tyr Val Ala Ser Asp Leu Glu Ile Gly Gln
1 5 10 15

His

<210> 2215

<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 18

<400> 2215

Ile Glu Glu Leu Arg Gln His Leu Trp Arg Trp Gly Phe Phe Thr Pro
1 5 10 15

Asp

<210> 2216
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 19

<400> 2216

Gln His Leu Leu Arg Trp Gly Phe Phe Thr Pro Asp Lys Lys His Gln
1 5 10 15

Lys

<210> 2217
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 20

<400> 2217

Gln His Leu Leu Arg Trp Gly Phe Tyr Thr Pro Asp Lys Lys His Gln
1 5 10 15

Lys

<210> 2218
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 RT peptide 21

<400> 2218

Arg	Trp	Gly	Phe	Thr	Thr	Pro	Asp	Gln	Lys	His	Gln	Lys	Glu	Pro	Pro
1						5			10					15	

Phe

<210> 2219

<211> 99

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 2219

Pro	Gln	Ile	Thr	Leu	Trp	Gln	Arg	Pro	Leu	Val	Thr	Ile	Lys	Ile	Gly
1						5			10				15		

Gly	Gln	Leu	Lys	Glu	Ala	Leu	Leu	Asp	Thr	Gly	Ala	Asp	Asp	Thr	Val
						20		25				30			

Leu	Glu	Glu	Met	Asn	Leu	Pro	Gly	Arg	Trp	Lys	Pro	Lys	Met	Ile	Gly
						35		40			45				

Gly	Ile	Gly	Gly	Phe	Ile	Lys	Val	Arg	Gln	Tyr	Asp	Gln	Ile	Leu	Ile
						50		55			60				

Glu	Ile	Cys	Gly	His	Lys	Ala	Ile	Gly	Thr	Val	Leu	Val	Gly	Pro	Thr
65						70			75			80			

Pro	Val	Asn	Ile	Ile	Gly	Arg	Asn	Leu	Leu	Thr	Gln	Ile	Gly	Cys	Thr
						85		90			95				

Leu Asn Phe

<210> 2220

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 protease peptide 1

<400> 2220

Gln	Ile	Thr	Leu	Trp	Gln	Arg	Pro	Ile	Val	Thr	Ile	Lys	Ile	Gly	Gly
1						5			10			15			

Gln

<210> 2221

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 protease peptide 2

<400> 2221

Thr Ile Lys Ile Gly Gly Gln Leu Arg Glu Ala Leu Leu Asp Thr Gly
1 5 10 15

Ala

<210> 2222

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 protease peptide 3

<400> 2222

Ala Leu Leu Asp Thr Gly Ala Asp Asn Thr Val Leu Glu Glu Met Asn
1 5 10 15

Leu

<210> 2223

<211> 17

<212> PRT

<213> Artificial

<220>

<223> HIV-1 protease peptide 4

<400> 2223

Leu Pro Gly Arg Trp Lys Pro Lys Ile Ile Gly Gly Ile Gly Gly Phe
1 5 10 15

Ile

<210> 2224

<211> 17

<212> PRT

<213> Artificial

<220>
<223> HIV-1 protease peptide 5
<400> 2224

Gly Arg Trp Lys Pro Lys Met Ile Val Gly Ile Gly Gly Phe Ile Lys
1 5 10 15

Val

<210> 2225
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 protease peptide 6

<400> 2225

Trp Lys Pro Lys Met Ile Gly Gly Val Gly Gly Phe Ile Lys Val Arg
1 5 10 15

Gln

<210> 2226
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 protease peptide 7

<400> 2226

Lys Met Ile Gly Gly Ile Gly Gly Leu Ile Lys Val Arg Gln Tyr Asp
1 5 10 15

Gln

<210> 2227
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 protease peptide 8

<400> 2227

Met Ile Gly Gly Ile Gly Gly Phe Val Lys Val Arg Gln Tyr Asp Gln
1 5 10 15

Ile

<210> 2228
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 protease peptide 9

<400> 2228

Lys Val Arg Gln Tyr Asp Gln Ile Pro Ile Glu Ile Cys Gly His Lys
1 5 10 15

Ala

<210> 2229
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 protease peptide 10

<400> 2229

Thr Val Leu Val Gly Pro Thr Pro Ala Asn Ile Ile Gly Arg Asn Leu
1 5 10 15

Leu

<210> 2230
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 protease peptide 11

<400> 2230

Thr Val Leu Val Gly Pro Thr Pro Thr Asn Ile Ile Gly Arg Asn Leu
1 5 10 15

Leu

<210> 2231

<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 protease peptide 12

<400> 2231

Leu Val Gly Pro Thr Pro Val Asn Val Ile Gly Arg Asn Leu Leu Thr
1 5 10 15

Gln

<210> 2232
<211> 17
<212> PRT
<213> Artificial

<220>
<223> HIV-1 protease peptide 13

<400> 2232

Val Asn Ile Ile Gly Arg Asn Leu Met Thr Gln Ile Gly Cys Thr Leu
1 5 10 15

Asn